

**WAI'ANAE**  
***SUSTAINABLE COMMUNITIES PLAN***

**DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU**

**HONORABLE JERMY HARRIS, MAYOR**



**January 2000**

**Office of the City Clerk  
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WAT ANA

JUSTIFIABLE COMMITTEES

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT  
CITY AND COUNTY OF DENVER

HONORABLE JERRY PATRICK, MAYOR



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## DEVELOPMENT PLANS

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## WAI`ANAE SUSTAINABLE COMMUNITIES PLAN

### PREFACE

The Wai`anae *Sustainable* Communities Plan has been prepared in accordance with the Charter-prescribed requirements for Development Plans and is to be accorded force and effect as such for all Charter- and ordinance-prescribed purposes. It is one of a set of eight community-oriented plans intended to help guide public policy, investment, and decision-making over the next 20 years. Each of the plans addresses one of eight planning regions of O`ahu, responding to specific conditions and community values of each region. The map on the following page illustrates these planning regions.

Of the eight documents, the plans for Ewa and the Primary Urban Center, to which growth and supporting facilities will be directed over the next 20 years, have been entitled "Development Plans." They will be the policy guide to development decisions and actions needed to support that growth.

Plans for the remaining six areas, which are envisioned as relatively stable regions in which public programs will focus on supporting existing populations, have been entitled "*Sustainable* Communities Plans" in order to appropriately indicate their intent.

The plan for the Wai`anae District, is a *Sustainable* Communities Plan. This Plan's vision statement and supporting provisions are oriented to maintaining and enhancing the region's ability to sustain its unique character, current population, growing families, rural lifestyle, and economic livelihood, all of which contribute to the region's vitality and future potential.

### P.1 THE SUSTAINABLE COMMUNITIES PLAN PROCESS

This document is the culmination of a planning program led by the City and County of Honolulu's Planning Department and its successor agency, the Department of Planning and Permitting. This planning process encouraged and enabled significant involvement from the region's neighborhood board, community associations, business leaders, religious and cultural organizations, private landowners, institutions and numerous individuals. In its final form, the plan will have incorporated input received from:

- Interviews with many community leaders;
- Interviews with other Wai`anae people;
- Meetings with about twenty community groups and organizations;
- Formation of a "Citizen's Advisory Committee" (CAC) with representatives from some 30 community groups and organizations;
- A series of four CAC meetings and three public informational meetings;
- Approximately 40 comment letters that provided input on the "Public Review Draft" of the Plan, published in October, 1998;
- Subsequent comments received from the Wai`anae Neighborhood Board and from staff members of the Department of Planning and Permitting.

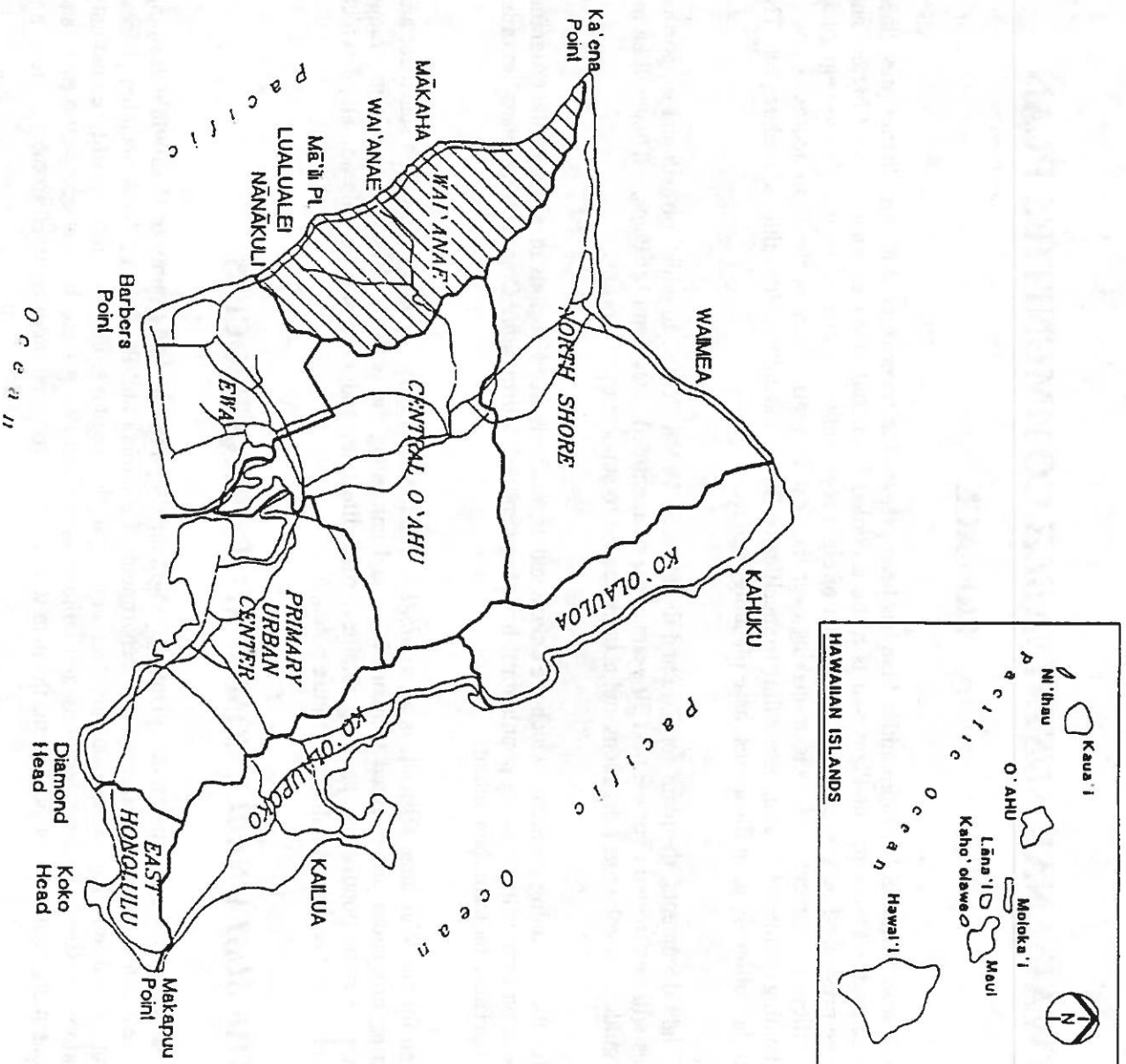


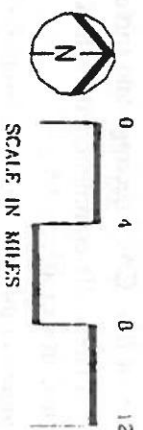
FIGURE P-1

# ISLAND OF O'AHU

## DEVELOPMENT PLAN AND SUSTAINABLE COMMUNITIES PLAN AREAS Wai'anac Sustainable Communities Plan

Department of Planning and Permitting  
City and County of Honolulu

April 1999



## **P.2 THE HONOLULU LAND USE PLANNING AND MANAGEMENT SYSTEM**

The City and County of Honolulu guides and directs land use and growth through a three-tier system of goals and objectives, policies, planning principles, guidelines and regulations. The General Plan forms the first tier of this system. First adopted by City Council resolution in 1977, the General Plan is a relatively brief document, consisting primarily of one-sentence statements of goals, objectives and policies. It has been amended several times, but the basic objectives and policies set forth in the 1977 plan remain intact.

The second tier of the system is formed by the Development Plans, which are adopted and revised by ordinance. These plans address eight geographic regions of the island, including the Primary Urban Center, East Honolulu, Central O`ahu, Ewa, Wai`anae, North Shore, Ko`olau Loa and Ko`olaupoko. Under the current revision program, the Primary Urban Center and Ewa plans retain the title "Development Plan." The plans for the other regions are now referred to as "*Sustainable Communities Plans*" to reflect their policy intent.

The third tier of the system is composed of the implementing ordinances, including the Land Use Ordinance (Honolulu's zoning code) and the City's Capital Improvement Program. Mandated by the City Charter, these ordinances constitute the principal means for implementing the City's plans. These ordinances are required to be consistent with the General Plan, the Development Plans, and each other.

In addition to these three Charter-mandated tiers, the Development Plans are supplemented by two planning mechanisms that are not required by the Charter: the functional planning process and special area planning. Functional planning activities, some of which are mandated by state or federal regulations, provide long-range guidance for the development of public facilities such as the water system, wastewater disposal, and transportation. Special area plans are intended to give specific guidance for neighborhoods, communities or specialized resources.

## **P.3 AUTHORITY OF THE DEVELOPMENT PLANS AND SUSTAINABLE COMMUNITIES PLANS**

The authority for the Development Plans and *Sustainable Communities Plans* (hereinafter referred to as "Development Plans" for simplicity) is derived from the City Charter, which mandates preparation of a General Plan and Development Plans to guide "the development and improvement of the city." Together with the General Plan, the Development Plans provide policy guidance for the land use and budgetary actions of the City. This is the authority the originally adopted Development Plans carried, and it remains unchanged in the revised Plan presented in this document.

The Charter provides that "public improvement projects and subdivision and zoning ordinances shall be consistent with the development plan for that area." Although the Development Plans are not themselves regulatory, they "regulate the regulators." They are policy tools and are to be used, in conjunction with the programs and budgets of the City, to accomplish the objectives of the City and as guides for decisions made by the private sector.

**P.4 WHY THE DEVELOPMENT PLANS HAVE BEEN REVISED**

In 1992 the City Charter Commission recommended, and the voters of Honolulu adopted, amendments to the City Charter. Chief among its findings, the Charter Commission concluded that the Development Plans were overly detailed and had created processes that duplicated the zoning process. To eliminate this unnecessary duplication, the 1992 Charter amendments changed the definition of Development Plans from "relatively detailed plans" to "conceptual schemes."

The 1992 Charter amendments established that the purpose of the Development Plans is to provide:

- priorities . . . (for the) coordination of major development activities"; and
- sufficient description of the "desired urban character and the significant natural, scenic and cultural resources . . . to serve as a policy guide for more detailed zoning maps and regulations and public and private sector investment decisions."

In response to the 1992 Charter amendments, the Planning Department launched a thorough review of the Development Plans. The goal of that review was the revision of all eight of the Development Plans to bring them into conformance with the Charter-mandated conceptual orientation. The revised plan presented in this document conforms to that mandate.

## **EXECUTIVE SUMMARY OF THE WAI`ANAE SUSTAINABLE COMMUNITIES PLAN**

This plan is organized in five chapters and an appendix, as follows:

**Chapter 1: "Wai`anae's Role in O`ahu's Development Pattern"** defines the region's role and identity within the overall framework of islandwide planning and land management.

**Chapter 2: "The Vision for the Future of the Wai`anae District"** summarizes the community's vision for the future of the region, and describes important elements of that vision.

**Chapter 3: "Land Use Policies and Guidelines"** is the plan's policy core. It provides policy guidance for the region's various land use elements.

**Chapter 4: "Public Facilities and Infrastructure Policies and Guidelines"** provides policies and guidelines needed to support the planned land uses.

**Chapter 5: "Implementation"** addresses needs for carrying out provisions outlined by the plan.

Summarized below are the key recommendations contained in each of these chapters.

**CHAPTER 1: WAI`ANAE'S ROLE IN O`AHU'S DEVELOPMENT PATTERN**

*Consistent with the directed growth policies of the City's General Plan, the Wai`anae District is targeted for very little growth over the 20-year timeline of this plan. The focus of the plan is thus preservation of the rural landscape and of the country lifestyle of the Wai`anae District's people.*

It is also noted in this chapter that land development and population trends in the Wai`anae District over the past 40 years are such that "keeping Wai`anae country" will be a difficult policy to implement. Since 1950, this District's population has increased from only 3,000 people to more than 40,000 people by 1998. Together with this population growth, there has been a tremendous growth in all forms of urban/suburban development, including housing, commercial centers, industrial uses, schools and other public buildings, roads, and utilities.

Wai`anae is the most "developed" of O`ahu's rural districts. Without strong City policies and actions, this District may lose its remaining rural qualities within the next generation.

**CHAPTER 2: THE VISION FOR THE FUTURE OF THE WAI`ANAE DISTRICT**

*This chapter presents a community-based vision statement for the Wai`anae District, and also describes the basis for this vision, including: Community Values, Rural Values and Qualities, the Community Participation Process, the Ahupua`a/Ecosystem Concept, and Environmental Criteria for Land Use Planning. More detailed "Elements of the Vision" are also described.*

The community-based vision statement is:

*The Vision for the Future of Wai`anae is a Vision of a Community living by values and customs that are firmly embedded in the rural landscape, the coastal shorelands, the ocean waters, the forested mountains, the diversity of cultures, the warmth of family and friends, and the Wai`anae traditions of independence, country living, and aloha.*

The Community Values that underlie this vision statement include the following:

- "Ours is a living culture of the land and the sea."*
- "Relationships are fundamental to our values and identity."*
- "We are a rural community."*
- "We are a community with small town values."*
- "We value economic choices in Wai`anae."*
- "Our elderly have much to teach us."*
- "We cherish our children."*

The Wai`anae District's **Rural Values and Qualities** are expressed and exemplified by the hundreds of small farms in the District, the extensive open spaces and cultural resources, the rugged beauty of the Wai`anae Mountains, the many miles of sandy beaches, and the small town values of Wai`anae's people.

The **Community Participation Process** went far beyond the usual few "public meetings." Recognizing the special nature of the Wai`anae community, the planning team designed and implemented an extensive community participation process that included one-on-one meetings with community leaders, interviews of citizens from various walks of life, meetings with small focus groups and community organizations, and the

organization of a 50-member "Citizens Advisory Committee" with representatives from all of the important local groups and organizations.

The *Ahupua`a/Ecosystem Concept* is suggested as a tool for physical and resource planning for the Wai`anae District, where the traditional ahupua`a land divisions are strongly defined by natural mountain and ridgeline features, and where the ahupua`a divisions are still recognized by many of the residents as important definers of community boundaries.

The subsection on **Environmental Criteria for Land Use Planning** summarizes the overall planning opportunities and constraints relating to the local climate, soil conditions, local aquifers, cultural resources, coastal resources, flooding and drainage, town centers and village centers.

The *Wai`anae Concept* is illustrated in the form of a color concept map. The elements of this concept, which is a further articulation of the Vision Statement, include:

- The traditional Ahupua`a of the Wai`anae Coast;
- The establishment of defined boundaries for preservation, agriculture, and rural community areas;
- The designation of town centers and village centers;
- Plans for Community Gathering Places;
- Preservation and restoration of streams and stream corridors;
- Preservation and protection of important cultural sites and cultural landscapes;
- Preservation of lands north of Kepuhi Point as open space lands;
- Restriction of coastal development makai of Farrington Highway;
- Beautification of Farrington Highway;
- Evaluation of the feasibility of a reliever highway.

### CHAPTER 3: LAND USE POLICIES AND GUIDELINES

*This chapter presents general policies and guidelines for the major land uses planned for the Wai`anae District. Also included in this chapter is some "overview" data and information on each of the land use types. For more detailed information on the District's history, natural resources, demographics, development, and other concerns, the reader is referred to the "Wai`anae Sustainable Communities Plan---Background Report," which is available from the Department of Planning and Permitting.*

The principal land use policies are summarized as follows:

#### 3.1 Preservation of Open Space

- Preserve and protect open space and scenic beauty.

- For proposed projects, provide a detailed analysis of the potential impact on open space and scenic beauty.
- No future urban/suburban development in areas where open space is of critical concern.

### **3.2 Preservation of Coastal Lands**

- No new coastal development makai of Farrington Highway.
- Pursue opportunities to acquire coastal properties to return these lands to public use.
- Shore armoring structures should be discouraged.

### **3.3 Preservation of Mountain Forest Land**

- Preserve and protect mountain forest lands in their natural state.
- Work toward the restoration of endemic and indigenous forest plants and animals.
- Do not permit uses that would degrade the District's natural forest lands.

### **3.4 Preservation of Streams and Stream Floodplains**

- Establish Stream Conservation Corridors.
- Restrict uses within stream conservation corridors to those uses that will not have an adverse impact on stream ecosystems.
- Establish minimum in-stream flow standards for the District's few perennial streams.

### **3.5 Preservation of Historic and Cultural Resources**

- Preserve and protect major concentrations of cultural sites.
- Preserve other scattered important cultural sites.

### **3.6 Preservation of Agricultural Lands**

- Establish a firm boundary for Important Agricultural Lands.
- Define uses that are compatible with agricultural use.
- Provide zoning and tax incentives for people to farm the land.

### **3.7 Residential Land Use**

- No increase in lands designated for residential use.
- Coordination with Department of Hawaiian Home Lands is important.
- Development encroachment on Agriculture Lands should not be permitted.

- Develop a Special Area Plan for Mākaha Valley.

### **3.8    Commercial and Industrial Uses**

- Encourage commercial and light industrial businesses that will serve the community.

### **3.9    Country Towns, Rural Community Commercial Centers, and Gathering Places**

- Establish a phased development program for commercial centers and Gathering Places.

### **3.10   Parks and Recreational Areas**

- Development of adequate public parks should be a top priority.
- No more golf courses should be permitted in the Wai`anae District.

### **3.11   Military Land Use**

- The City's long-range land use policy for the military lands at Luahalei and at Mākua Valley is that these lands should be preserved as agriculture/open space lands.
- The importance of the U.S. military uses of these lands is also recognized.
- Cooperative programs will be continued and developed for the protection of important cultural and natural resources found on military lands in the Wai`anae District.

## **CHAPTER 4: PUBLIC FACILITIES AND INFRASTRUCTURE POLICIES AND GUIDELINES**

*This chapter presents general policies and guidelines for the major public facilities and infrastructure systems in the Wai`anae District. The major policies may be summarized as follows:*

### **4.1    Transportation Systems**

- Design and implement a safety improvements program for Farrington Highway.
- Implement a beautification program for Farrington Highway.
- Establish an "Emergency Road" route for use when Farrington Highway is blocked.
- Study the need for and possible alignments for a "Reliever Road" that could carry some of the commuter traffic and allow for downsizing of Farrington Highway.
- Provide local shuttle bus or van service as a supplement to the regular City bus system.
- Encourage plans and programs for other modes of transportation, including bikeways and walkways.

### **4.2    Potable Water Systems**

- Determine the safe yield of local aquifers as related to stream flow.
- Develop programs for the conservation and efficient use of scarce local potable water supplies.

- Provide affordable water for the farmers of the Wai`anae District.

#### **4.3 Wastewater Collection and Treatment Systems**

- Implement a phased program for the replacement of old sewer lines.
- Implement landscaping improvements for the Wai`anae Wastewater Treatment Plant.

#### **4.4 Electrical Power and Communications**

- Reduce the visual impact of power lines and utility poles, especially along Farrington Highway.

#### **4.5 Drainage Systems**

- Develop a comprehensive plan for the correction of flooding and drainage problems.
- Implement a sediment control program.

#### **4.6 Solid Waste Handling and Disposal**

- Enforce antidumping laws.

#### **4.7 Civic, Public Safety and Educational Facilities**

- Improve Satellite City Hall facilities and provide more police officers for the Wai`anae Police Station.
- Select new school sites in conformance with the Wai`anae Sustainable Communities Plan.
- Plan for and emphasize the multipurpose function of schools as community resources.

### **CHAPTER 5: IMPLEMENTATION**

*This chapter discusses the various measures that will be necessary to ensure timely implementation of the plan, including measures that will minimize disruptions during the transition from the "old" Development Plan to the new "Wai`anae Sustainable Communities Plan." Changes to the zoning maps and to the City's Land Use Ordinance will be necessary to achieve required consistency with the Sustainable Communities Plan. Changes to other regulatory codes and ordinances will also be needed. This chapter also addresses monitoring of plan implementation and provides for comprehensive review of the plan at five-year intervals.*

### **APPENDIX A**

The Appendix contains three colored maps that illustrate some of the plan's policies and guidelines. These maps are intended to be illustrations of the text, and therefore should there be any conflicts between the maps and the text, the text shall govern.

## WAI`ANAE SUSTAINABLE COMMUNITIES PLAN

### 1. WAI`ANAE'S ROLE IN O`AHU'S DEVELOPMENT PATTERN

The General Plan for the City and County of Honolulu sets forth broad policies for the future harmonious growth and development of the Island of O`ahu. The General Plan's section on "Population" establishes several key growth management policies for the rural districts of O`ahu, including the Wai`anae District:

#### *"Objective C*

*To establish a pattern of population distribution that will allow the people of O`ahu to live and work in harmony.*

*Policy 1: Facilitate the full development of the primary urban center.*

*Policy 2: Encourage the development of a secondary urban center in the West Beach-Makiki area to relieve development pressures in the urban-fringe and rural areas.*

*Policy 3: Manage physical growth and development in the urban-fringe and rural areas so that:*

- a. An undesirable spreading of development is prevented; and*
- b. Their proportion of the islandwide resident population remains unchanged. "*

The 1989 Amendments to the General Plan included some important language on rural areas that applies to Wai`anae (Physical Development and Urban Design, Objective D, Policy 4): *"Maintain rural areas which are intended to provide environments supportive of lifestyle choices which are dependent on the availability of land suitable for small to moderate size agricultural pursuits, a relatively open and scenic setting, and/or a small town, country atmosphere consisting of communities which are small in size, very low density and low rise in character, and may contain a mixture of uses. " Or, more simply stated, "keep the country country. "*

Thus, the General Plan sets forth policies that emphasize the preservation of agriculture and rural land uses in Wai`anae, as well as in the other rural districts of the North Shore, Ko`olau Loa, and parts of Ko`olaupoko. The General Plan directs that Wai`anae's proportional share of O`ahu's 2010 population should be between 3.8 percent and 4.2 percent.

**Land development and population trends in the Wai`anae District over the past 40 years suggest that "keeping Wai`anae country" will be a difficult policy to implement.** The Farrington Highway corridor in the District, from Nānākuli to Mākaha, is already heavily developed. This developed coastal zone is about 8 miles long, and varies in width from about ¼ mile to over 1 mile. Land uses on the mauka side of Farrington Highway are typically suburban types of uses rather than rural uses: single family residential small lot development, multi-family residential development, shopping centers, a scattering of small commercial and industrial establishments, and various institutional and public uses including schools, health centers, fire and police stations, and a regional wastewater treatment plant. The makai side of the highway is dominated by beaches and beach parks, with some small subdivisions and a few larger apartment buildings.

Recently developed residential subdivisions are expanding this coastal development strip into the rural farm valleys of the District. Important parts of the District's infrastructure are being stressed and overloaded,

especially Farrington Highway, the public school system, and police and fire protection services.

The Revised *Sustainable* Communities Plan for the Wai`anae District addresses these core issues of preservation, growth, development, population, housing, infrastructure, and public facilities.

## 2. THE VISION FOR THE FUTURE OF THE WAI`ANAE DISTRICT

This section of the *Sustainable* Communities Plan presents a VISION STATEMENT for the long-range future of the Wai`anae District, summarizes the development of this Vision Statement and describes a WAI`ANAE CONCEPT that expresses the principal elements of this Vision.

### 2.1 VISION STATEMENT

*THE VISION FOR THE FUTURE OF WAI`ANAE IS A VISION OF A COMMUNITY living by values and customs that are firmly embedded in the rural landscape, the coastal shorelands, the ocean waters, the forested mountains, the diversity of cultures, the warmth of family and friends, and the Wai`anae traditions of independence, country living, and aloha.*

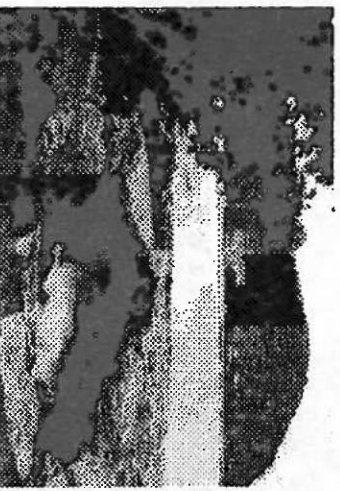
### 2.2 COMMUNITY VALUES

This overall vision statement has been developed through an understanding of important community values. Like most Hawai`i communities, Wai`anae is diverse. The thoughts shared in the community participation program have therefore been varied and covered a wide spectrum of ideas.

Nevertheless, amidst the differences were certain values that were frequently referred to or expressly stated. While it is not possible for everyone to share all of these values, they seem to be held by many people in the District, regardless of ethnicity, origin, or walk of life. Each frequently expressed value is listed below, followed by a description of what the value entails.

*"Ours is a living culture of the land and the sea."*

The mountains and valleys have natural and cultural resources which speak of the culture of Wai`anae. These resources include the remains of precontact Hawaiian settlements, and of plantation towns, farms and ranches. The community is working to restore some of these resources and traditional and cultural practices so that the past can continue in the present and will live in the future. Along the coast, people fish, surf, and gather with families and friends, as have past generations. Open spaces and access to the mountains, the valleys and the sea are an important part of people's lives.



Wai`anae's people practice their culture in many ways, and through friendship and marriage its culture has come to cross ethnic lines. Wai`anae's cultural mix is Hawaiian, Portuguese, Filipino, Japanese, Samoan,

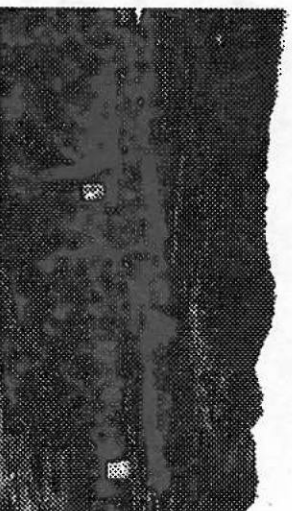
Chinese, Caucasian, Vietnamese, Korean, African American, and more.

*" Relationships are fundamental to our values and identity. "*

In this planning context, a relationship is an association between people and between people and their environment. In Wai`anae, the community has many relationships that are essential to the Wai`anae identity. People value family relationships, and extended families and close kinship are common. Their relationship to the land and the ocean is an essential part of living in Wai`anae. The people's relationships to their diverse cultures are also vital, and these associations affect how people relate to their physical environment. Wai`anae's relationship with agriculture is part of the community's way of life; it is sustenance, open space, and of the land.

*"We are a rural community. "*

Wai`anae is "country" to its residents. It is a place that is geographically and socially far from city life and city conveniences. It is a place where development is relatively low density, where there are still many small farms and agricultural activities. For many, Wai`anae's rural nature means freedom, the freedom to choose a way of life, to grow one's own food and to raise animals. In Wai`anae, the predominant features are still natural, with its blue ocean, its white sand beaches which line the coast, its green valleys and dramatic pu`u, and its mountain range which embraces the entire community. There are still large stretches of land that have no structures and that are visited only by those who know the land through family and word of mouth.



*"We are a community with small town values. "*

No matter how fast Wai`anae has grown, it is still a community with small town values. That means that many of the residents grew up together and many belong to multigeneration local families. They frequently gather with friends and neighbors. They come together to help each other when there is a need. They feel safe because they can depend upon each other. Wai`anae residents accept newcomers into their families and into their ahupua`a. However, many are concerned that, in the future, more newcomers will change the area's traditional social values.

*"We value economic choices in Wai`anae."*

For Wai`anae, economic choices within the region are vital to the community's well-being. Having jobs in Wai`anae allows families to spend less time commuting and more time with each other. It reduces traffic and stress. Economic choices also mean more convenience in acquiring necessary goods and services.

*"Our elderly have much to teach us."*

People in Wai`anae have great respect for the elderly.

The older people are the community's link to the past.

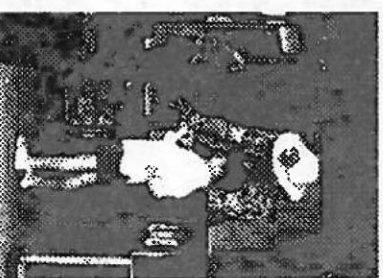
The elderly help young people and newcomers understand Wai`anae's culture and history. They teach others what they've learned from previous generations, so that their culture can live on through the children.

*"We cherish our children."*

Wai`anae's children are the future. The children need to

acquire the tools to prosper and carry on values and traditions.

The community wants the children to have adequate shelter, a safe environment, a supportive and nurturing community and a good education. They want their children to have a good future, choices in employment and housing within Wai`anae.

**2.3 WAI`ANAE DISTRICT: RURAL VALUES AND QUALITIES**

The rural values and qualities of the Wai`anae coast are expressed and exemplified by:

- The hundreds of small farms, many of them family-owned and operated, that raise livestock and grow various crops. These farms are found primarily in Lualualei and Wai`anae Valley;
- The extensive open spaces and special visual and cultural qualities of the principal valleys of the District: Nānākuli, Lualualei, Wai`anae, Mākaha, and Makua;

- The rugged beauty of the Wai`anae Mountains that shape and define the District;
- The miles of shoreline, sandy beaches, and beach parks;
- The "small town values" of many of Wai`anae's people, who are open, friendly, family-oriented, and strongly attached to the land and the sea.

The *Sustainable* Communities Plan process for O`ahu's rural communities seeks to look ahead to the year 2020 and beyond. The population of the Wai`anae region has grown significantly since the end of World War II. The District's population in 1950 was about 7,000 people, 2 percent of O`ahu's population at that time. By 1998, there were at least 40,000 people living in the Wai`anae District, about 4.5 percent of O`ahu's population. If these growth trends continue for the next 20+ years, this District could add 10,000 to 20,000 people to its population between 1998 and the year 2020.

**Population growth and land development in the Wai`anae District over the past 40+ years have been more typical of a suburbanizing urban fringe community than that of a stable rural community.** These growth and development trends are likely to continue unless the City implements a strong "growth control" plan for the District. Continued urban and suburban development will consume agricultural lands and put still more stress on Wai`anae's roads, schools, parks, and other facilities, which are already overcrowded. The country values and lifestyle that are of such great importance to the Wai`anae community will be further eroded and undermined.

**The Vision for the future of the Wai`anae Community CAN be attained if City policies and programs vigorously support the preservation of country lifestyles, the rural landscape, and the natural and cultural resources of this District.** The Wai`anae *Sustainable* Communities Plan is one important element in this overall City strategy for "keeping the country country" in Wai`anae.

## **2.4 COMMUNITY PARTICIPATION PROCESS**

The **VISION STATEMENT** for the Wai`anae *Sustainable* Communities Plan emerged through an extensive and intensive **COMMUNITY PARTICIPATION PROCESS**.

From an early stage in the Wai`anae *Sustainable* Communities Plan project, the planning team began to develop an overall strategy for a meaningful community participation process. The team received invaluable advice from a well-known member of the Wai`anae community who was at that time the Executive Director of the Wai`anae Coast Community Alternative Development Corporation.

"Public input" or "community input" has become a common "buzzword" in the public planning process: City and State agencies typically take some pains to assure decision-makers that "community input" has been solicited and received. In practice, however, this "input" often consists of one or two "public informational meetings" and/or public hearings in which the agency presents a summary of their plan or program to the public, and then listens to comments and questions for an hour or two. This kind of "community input" thus often has little influence on the actual shape and substance of the plan.

The planning team for the Wai`anae *Sustainable* Communities Plan was determined to undertake a more meaningful process wherein members of the community could truly participate in the formulation of the plan. The team felt that community "ownership" of the plan was essential. With the assistance and advice of the team's community advisor, a "three level" strategy for community participation was articulated and implemented:

1. First meet one-on-one with community leaders. Explain the scope of the Wai`anae *Sustainable* Communities Plan project. Seek the advice and assistance of these leaders.
2. Then meet with many small groups and local community organizations to explain the project and solicit their ideas and concerns. At the same time, conduct a number of one-on-one interviews with local people from various walks of life.
3. Based on steps 1 and 2 above, identify important community groups and organizations and ask them to participate in a series of "Community Advisory Committee" meetings. Use these broadly based community meetings to articulate a deeply grounded **VISION STATEMENT** for the Wai`anae Coast, and to evolve a *Sustainable* Communities Plan that builds on this overall Vision.

During the first months of the project, planning team members met with about a dozen well-known community leaders, talked with some twenty community groups and organizations, and interviewed another twenty individuals. Then about thirty groups, organizations, and agencies were invited to form a Community Advisory Committee and to participate in the development of the Wai`anae *Sustainable* Communities Plan. These organizations and agencies were as follows:

- Aha Leo Kupuna Kaiaulu
- Boys and Girls Club of Wai`anae
- Hawaii Filipinos of Wai`anae
- Hoa`aina o Mākaha
- Ho`omanu Ke Ola, Inc.
- Ka`ala Farms, Inc.
- Mākaha Ahupua`a Community Association

- Nani `O Wai`anae
- Na `Opio Aloha `Aina
- Na Kupuna O Nānākuli Ahupua`a
- Nānākuli Ahupua`a Council
- Nānākuli Hawaiian Homestead Community Association
- Ohana Lualualei Ahupua`a
- Puhawai Farmers Association
- Queen Liliuokalani Children's Center
- Wai`anae Ahupua`a Council
- Wai`anae Coast Coalition
- Wai`anae Coast Community Alternative Development Corp.
- Wai`anae Valley Homestead Association
- Wai`anae Coast Rotary Club
- West O`ahu County Farm Bureau
- Wai`anae O`ahu Employment Corporation
- Wai`anae Kai Homestead Association
- Wai`anae Coast Neighborhood Board (maximum of 10 members to serve on the CAC)
- Department of Hawaiian Home Lands
- O`ahu Hawaiian Homelands Community Board
- U.S. Navy
- U.S. Army

The Wai`anae *Sustainable* Communities Plan Community Advisory Committee (CAC) met four times during the course of the planning project. CAC meetings were also open to the general public. In addition, there were two open "public workshops" that involved CAC members and other people from the community. Attendance at these six meetings ranged from 40 to 60 community members. The focus of these six meetings was as follows:

- October 1997—the first CAC meeting focused on community problems, issues, and needs.
- February 1998—the second CAC meeting focused on a discussion of community values and desires for the future.
- April 1998—the third CAC meeting featured a presentation by the planning team of an "Environmental Concept" for the Wai`anae Coast, and a preliminary draft "Land Use Plan" for the future.
- May 1998—first open public workshop: "information fair" and presentation of progress to date on the Wai`anae *Sustainable* Communities Plan.

- October 1998—fourth CAC meeting: presentation of the "Public Review Draft" of the Wai`anae *Sustainable* Communities Plan.
- May 1999—presentation of the "Final Draft" of the Wai`anae *Sustainable* Communities Plan to the CAC and other interested community members.

In all, the planning team devoted over 1,000 hours to the various aspects of the community participation process. As a result of this focus on meaningful community participation, the Wai`anae *Sustainable* Communities Plan incorporates the overall Vision, the Values, and the desires for the future as expressed by Wai`anae's people.

## 2.5 THE AHUPUA`A/ECOSYSTEM CONCEPT

The VISION STATEMENT is further expressed by the Ahupua`a/Ecosystem planning concept.

Contemporary regional planning methods include a number of concepts that can be useful for the Wai`anae *Sustainable* Communities Plan, including:

- Watershed Planning
- Ecosystem Planning
- Town Center Planning

The traditional Hawaiian land division system of AHUPUA`A is strongly related to these planning concepts, and could be a powerful tool for physical planning for areas like Wai`anae where the ahupua`a are strongly defined and still recognized by many of the residents. It is interesting to consider the following:

- The major ahupua`a in the Wai`anae District—Nānākuli, Luahalei, Wai`anae, Mākaha, and Mākua—are all physically distinct valleys with associated ridges and mountain areas, and are at the same time distinct and separate stream watersheds. Nānākuli has one major stream (Nānākuli Stream), Luahalei has one major stream (Mā`ili`ili`i Stream) and one secondary stream (Ulehawa Stream), Wai`anae has one major stream (Kaupuni Stream) with several named branches, Mākaha has one major stream (Mākaha Stream) and two secondary streams, and Mākua has one major stream (Mākua Stream) and one secondary stream.

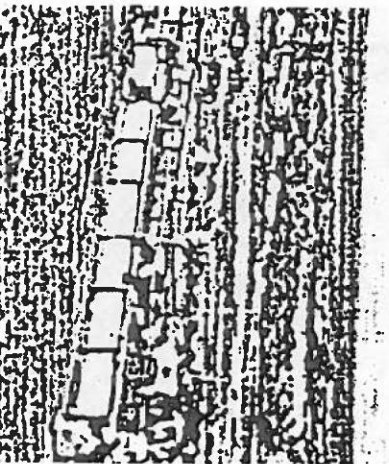


- Each of the major ahupua`a has a similar range of topographic/climatic zones that support similar ecosystems: a coastal/beach zone, a lower valley zone, an upper valley zone, dry valley walls, moister mountain slopes at the backs of the valleys.
- The major ahupua`a are to some degree identified with a particular subcommunity. This seems to be especially true of Nānākuli and is somewhat the case for Wai`anae, with its identifiable town center. The Luahalei ahupua`a has a diversity of development, including the village of Mā`ili, the farmlet communities along Hakimo Road and Luahalei Valley Road, and the two large U.S. Navy installations. Mākaha includes residential subdivisions near Farrington Highway, farmlets in the lower part of the valley, and the Mākaha Resort, Mākaha Towers, and Mākaha Estates projects in the central part of the valley.
- There appears to be among Wai`anae residents a growing interest in and recognition of the importance of ahupua`a as an organizing concept for community communication, coordination, and united action. The "Ahupua`a Councils," which were formed in 1994, have begun to evolve into important community-based planning and development entities.

## 2.6 ENVIRONMENTAL CRITERIA FOR LAND USE PLANNING

The VISION STATEMENT is further supported by an understanding of the Wai`anae District's land and water resources.

The overview of Wai`anae's environmental resources presented in the Wai`anae *Sustainable Communities Plan* Background Report provides some strong guidelines for land use and development planning for the district. These guidelines may be summarized as follows:



a)

Wai`anae's climate is very favorable for many types of agriculture. However, the district has a limited amount of good agricultural soils. If agriculture is to grow and expand here, there will need to be an emphasis on agricultural methods and products that can take advantage of the favorable climate but that do not require prime agricultural soils. Livestock farming is already very important here. Hydroponic crops may be one option. "Backyard aquaculture" is already being developed.

- b) **Expansive Soils are a constraint.** Some of the soils in the valleys, and most of the soils on the lower slopes of the ridges and mountains are highly expansive clay soils that are not good for either agriculture or construction of foundations for homes and other structures. These expansive soils can be built on—with special foundation construction techniques—on relatively level sites. However, steeper sites are subject to slumping and sliding, and should not be developed.

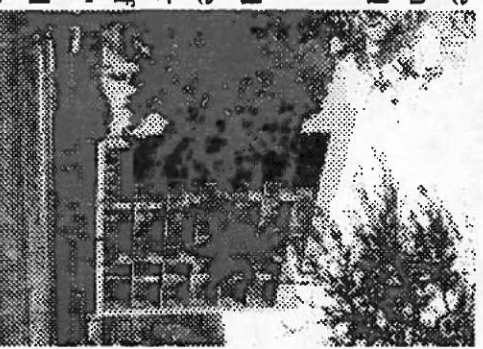
- c) **The District's aquifers have a very small *sustainable* yield.** The *sustainable* yield of the dike-formation aquifers in the district is only about 6 mgd, which is about what the City is currently pumping from their wells in Wai`anae and Mākaha Valleys. This volume of water is less than the current district demand of 8 to 9 mgd. The balance of 2 to 3 mgd is currently imported into the district from the much larger Pearl Harbor aquifer system.

The Wai`anae District's limited groundwater resources suggest that major water users like golf courses should not be developed here. Further, since all new development will increase the amount of potable water that will have to be imported, and since the long-range prospect for potable water on O`ahu is for a continued future increase in both demand and cost, significant growth of housing and commercial uses in Wai`anae should not be encouraged. Nonpotable water sources, including reclaimed water, will need to be further developed so that the limited local supply of potable water can be put to best use.

- d) **There are large natural and cultural resource areas in the Wai`anae District that should be protected and managed so that the resources are preserved or enhanced.** These important areas include the higher elevations of the Wai`anae Range, where there are important plant and animal ecosystems, and the undeveloped upper valley areas of Nānākuli, Lualualei, Wai`anae, Mākaha and Mākua, where there are extensive archaeological sites.

Consideration should be given to defining special resource protection or resource management zones that could be included in the Wai`anae *Sustainable* Communities Plan graphic plans and policy statements.

- e) **Special attention should be given to the protection and preservation of Wai`anae's coastal resources, including the district's beaches and coral reefs.** There should be no further commercial or residential development on the makai side of Farrington Highway. The construction of "shore armoring" structures should be discouraged. There should be no coastal development at all beyond Mākaha. A long-range program for the control of nonpoint source pollution of nearshore waters needs to be developed.



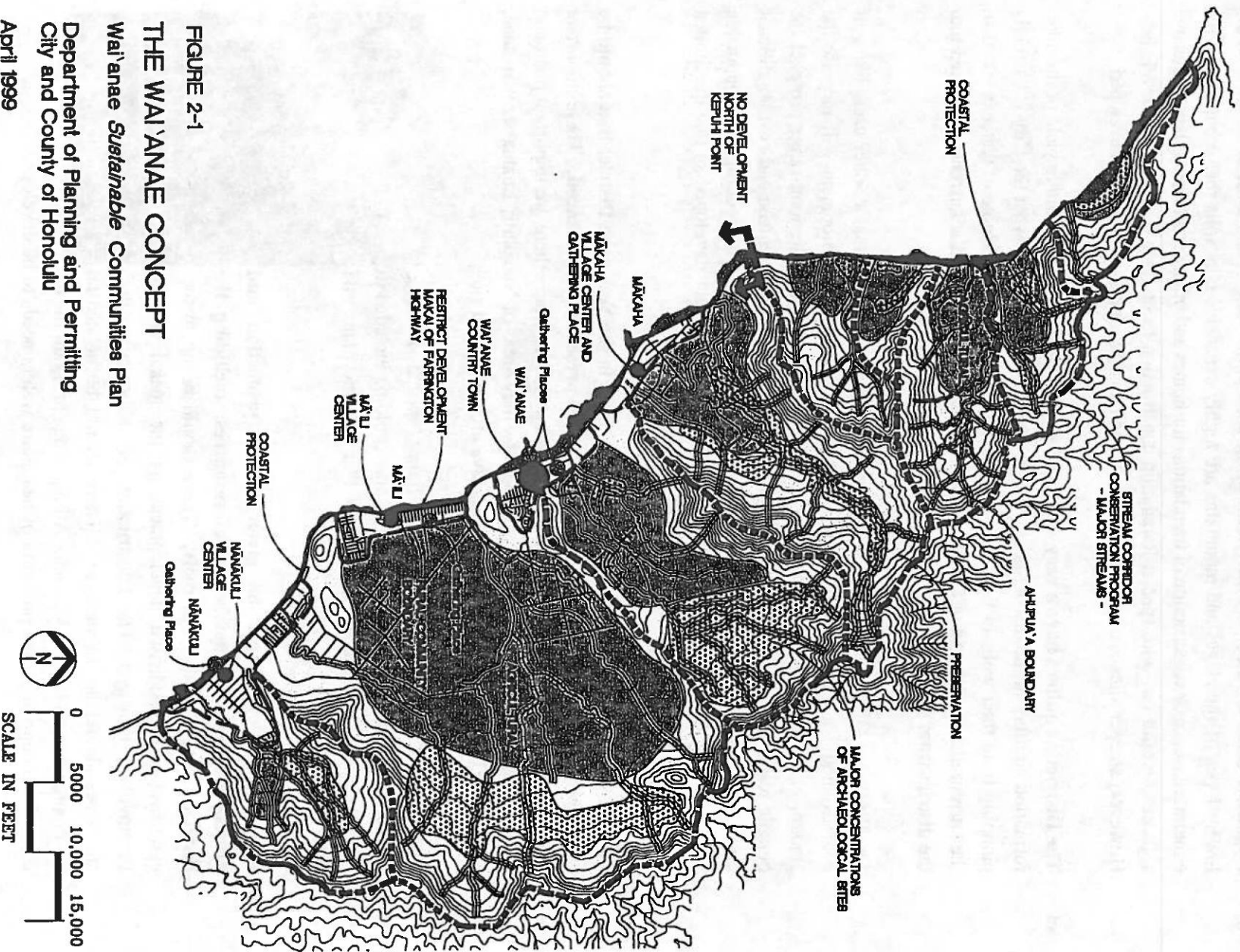


FIGURE 2-1

## THE WAI'ANAE CONCEPT

Wai'anae *Sustainable* Communities Plan

Department of Planning and Permitting  
City and County of Honolulu

April 1999

- f) **A comprehensive plan needs to be developed for specific drainage and roadway improvements to alleviate local flooding problems.** An emergency roadway route needs to be created so that people have an alternate means of moving through and out of the district when Farrington Highway is blocked by storm flooding or other problems.
- g) **Town Centers and Village Centers.** Consideration should be given to the incremental development of identifiable town centers and village centers for the district's subcommunities.
- h) **The ahupua`a planning concept should be incorporated into the *Sustainable Communities* Plan process.**

## 2.7 THE WAI'ANAE CONCEPT

The overall approach to land use and environmental planning in support of the Vision Statement for Wai'anae is embodied in the graphic entitled "THE WAI'ANAE CONCEPT". This concept emerged from a planning process that had a strong dual focus: (1) extensive community participation and (2) an understanding of the natural and cultural resources of the Wai'anae Coast. The principal elements of the Wai'anae Concept are:

- Recognize the traditional AHUPUA`A land divisions of the Wai'anae Coast and adapt the ahupua`a concept as a framework for land use and open space planning;
- Establish four major land and resource types with defined boundaries:
  - 1. Preservation lands;
  - 2. Coastal lands;
  - 3. Agriculture lands;
  - 4. Rural community areas;
- Designate Wai'anae Town Center as a "Country Town",
- Designate Village Centers for the communities of Nānākuli, Mā'ili/Lualualei, and Mākaha;
- Plan and develop Community Gathering Places for Nānākuli, Mā'ili, Lualualei, Wai'anae, Mākaha, and other subcommunities of the District, as needed;
- Preserve and restore important streams and stream corridors;

- Preserve and protect important cultural sites and cultural landscapes;
- Preserve all lands north of Kepuhi Point as open space lands;
- Restrict coastal urban/suburban or resort development makai of Farrington Highway,
- Plan and implement safety improvements and beautification programs for Farrington Highway to bring the community closer to the beaches and coastline;
- Evaluate the feasibility of a new roadway that could divert commuter traffic from Farrington Highway.

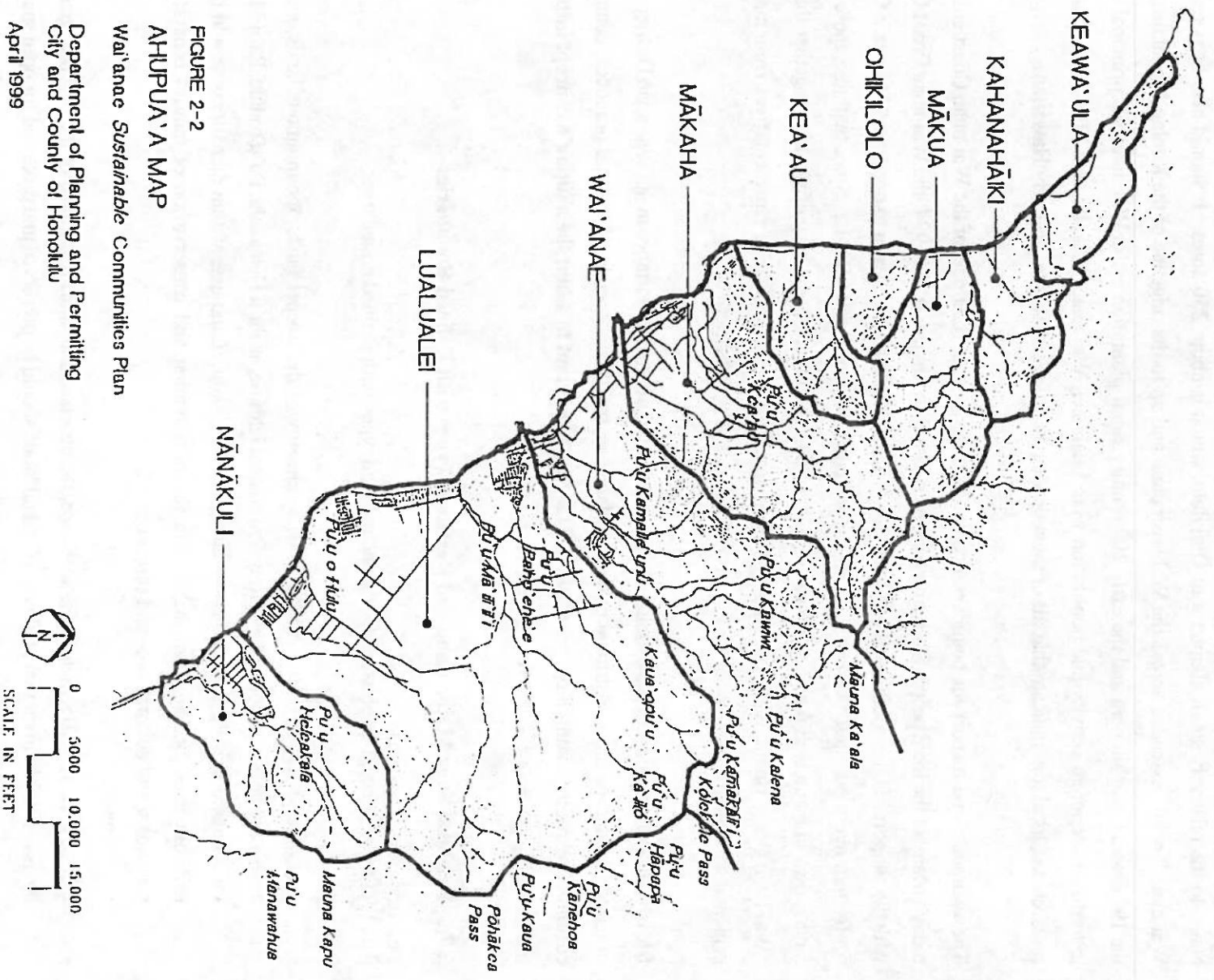
The Waiʻanae Concept is not meant to be a detailed land use plan—the concept provides the physical and conceptual framework for the Waiʻanae *Sustainable Communities* Plan policies and related maps. The principal elements of the Waiʻanae Concept and the long-range Vision for the Waiʻanae District are discussed in some detail below.

### 2.7.1 Recognize the Traditional Ahupuaʻa Land Divisions

In traditional Hawaiian culture, the ahupuaʻa—a division of land that usually stretched from the fishing and gathering waters of the sea to the top of the mountains—provided the principal physical and social structure for the society. Each ahupuaʻa had its own name and carefully defined boundary lines. The ahupuaʻa boundaries were important and were respected.

The traditional ahupuaʻa of the Waiʻanae Coast are strongly defined by the District’s natural geologic and topographic form of steep-walled valleys. The ahupuaʻa of Waiʻanae also embrace the natural stream systems of each valley, together with their associated historic and contemporary agricultural lands. There are nine ahupuaʻa in the Waiʻanae District:

- Nānākuli
- Lualualei
- Waiʻanae
- Makaha
- Keaʻau
- Ohikilolo
- Mākua
- Kahanahāiki
- Keawaʻula



The ahupua`a of the Wai`anae Coast range in size from the great valley of Luahalei, which covers some 10,000 acres, to the relatively small ahupua`a of Ohikilolo, which is about 250 acres. It should also be noted that the Wai`anae “moku” extended across the Wahiawa plain and up to the ridgeline of the Koolau Mountains. During the 19<sup>th</sup> century ranching era and the early 20<sup>th</sup> century sugar plantation era in Wai`anae, the principal ahupua`a in terms of economic activity and population were Luahalei, Wai`anae, Mākaha, and Mākua. Archaeological research and local lore indicate that all of the nine ahupua`a were settled by the early Hawaiians.

The awareness and respect for boundaries continues to be an important part of the Wai`anae Coast culture even today. Many of the local people feel a strong identity with their ahupua`a. In 1994, the Wai`anae Coast Coalition, with the support of Queen Liliuokalani Children’s Center-Nānākuli Unit, began to organize “Ahupua`a Councils” for the four major populated valleys: Nānākuli, Luahalei, Wai`anae, and Mākaha. Since that time, these Councils have grown in membership and activities. The Councils have developed a way of working together through the “Wai`anae Coast Coalition,” a community-based organization that consists of representatives from many of the principal community groups and social service agencies in the District.

Clearly, then, the concept of the ahupua`a has great significance and importance in the Wai`anae District – in terms of natural landscape form, historical patterns of land use, traditional social and cultural practices, contemporary customs, and recent community organization. It is thus important to adapt the ahupua`a concept into the land use planning process for the Wai`anae Coast.

#### 2.7.2 Establish Four Major Land and Resource Types with Defined Boundaries

The Wai`anae Concept establishes four principal land types with defined boundaries:

- The **PRESERVATION LANDS** consist generally of the steeper lands, mountainous lands, and coastal ridges and pu`u, including such prominent coastal features as Pu`u Heleakala, Pu`u o Huhu, Pu`u Mā`ili`ili, Pu`u Pāhe`ehe`e, Pu`u Kamaileunu, and Mauna Lāhlahi. Land uses within these areas should be limited to those uses that are compatible with the preservation and conservation of natural ecosystems and traditional and cultural sites and resources.
- **COASTAL LANDS** include the surf zone, the beaches, and lands just inland of the beaches: generally all lands makai of Farrington Highway. Coastal lands should be preserved and protected for open space, beach parks, and public access. New residential, commercial, or resort development should generally not be permitted makai of Farrington Highway. Over time, inappropriate coastal development, including mid-rise condominium buildings, should be phased out and these sites should be restored to public use.

- The **AGRICULTURAL LANDS** should encompass the farmlands and undeveloped valley lands in the nine ahupua'a of the Wai'anae Coast. Agricultural land uses within these areas, including commercial farms, family farms, and family gardens, should be preserved and encouraged. Land uses within these areas should be limited to agriculture and other uses that are compatible with a rural landscape and country lifestyle. These compatible uses include farm dwellings, small country stores, agricultural support facilities including storage and small-scale processing of farm products, and cultural places and preserves. Residential subdivisions including large acreage "gentlemen estates," public or private schools, and golf courses are not compatible uses.

- **RURAL COMMUNITY AREAS** are defined by a line that generally follows the limits of existing urban and suburban development along the Farington Highway corridor. Within the Rural Community areas, there should be a limited amount of acreage for infill residential and commercial development. With the exception of a small number of isolated farm lots that are already surrounded by housing development, no other agricultural lands should be included within these development areas. Continued small-scale agricultural uses on these farm lots should be encouraged.

### 2.7.3 Country Town and Village Centers

Within the **RURAL COMMUNITY** areas of each of the principal developed ahupua'a—Nānākuli, Lualualei, Wai'anae, and Mākaha—there is the need for the development of more strongly defined commercial and service Centers. These Centers should contain a concentration of small retail businesses, restaurants, professional offices like dentists and doctors, and social services offices. They should also contain some clustered housing units, including second-story housing units above ground-level commercial space. Structures would be one or two stories in height. This more efficient development pattern would provide for a stronger local community identity, encourage more pedestrian traffic and less dependence on cars, support small local businesses, and potentially alleviate the strong "strip commercial" development pattern that presently exists along Farington Highway.

This concept includes the proposed designation of Wai'anae town center as a "Country Town" commercial and service center. Historically, at least from the mid-19<sup>th</sup> century, Wai'anae Town was the most important settlement in the District. Today, with Wai'anae Mall and the mix of small older buildings and newer buildings in the vicinity of Pōkai'i Bay, Wai'anae Town Center is the area of the District that is recognized as the largest concentration of commercial and services facilities.

Smaller "Village Centers" are schematically shown on the Wai'anae Concept graphic for the communities of Nānākuli, Lualualei/Mā'ilī, and Mākaha. These smaller commercial centers would provide shops, stores,

restaurants, and social service offices for the local communities, as well as a stronger sense of physical identity.

For both the Wai'anae Country Town and the several Village Centers, a phased action program for capital improvements and investment needs to be developed.

#### **2.7.4 Community Gathering Places**

Community Gathering Places of several acres each are needed within the major ahupua'a. These Gathering Places are quite different from the predominantly retail commercial Country Town and Village Centers. As envisioned by community groups, the Gathering Places are open areas with perhaps a few small buildings where people can gather informally to visit and talk story, have parties and celebrations; stage festivals and special events; teach and learn traditional crafts, music, and dance; buy, sell, and barter homegrown produce and homemade items, and generally renew contact with friends and neighbors.

Given the range of community activities envisioned for these Gathering Places, it is recommended that they be located within the residential communities and not along the automobile-oriented main transportation route of Farrington Highway. The Gathering Places thus could be close to the Country Town or Village Centers, but, with the possible exception of Makaha Village Center, should not be located within the Centers. In the case of Makaha, a community group is already working toward the establishment of a Community Gathering Place at the site of the former Coronet Store complex at Farrington Highway and Makaha Valley Road.

The *Sustainable Communities* Plan recognizes the importance of these Community Gathering Places. The exact location of these Places will depend on many factors, and cannot be precisely determined at this time. The locations for Gathering Places that are shown on the Wai'anae Concept graphic and on the *Sustainable Communities* Plan Open Space Map should therefore be considered preliminary in nature.

#### **2.7.5 Stream Conservation Corridors**

The major streams and stream corridors of Wai'anae's valleys are very important elements of the landscape and the natural ecology of the region. Some of these streams are perennial streams near their origins high in the Wai'anae Mountains, but all are intermittent streams as they flow down through the valleys. Hundreds of years ago, when the Hawaiian people first began to settle the ahupua'a of the Wai'anae Coast, they located the streams with year-round flows and tapped these streams for water for extensive terraced *lo'i kalo*, located in the upper sections of the larger valleys: Nānākuli, Lualualei, Wai'anae, Mākaha, and Mākua. The streams were also essential as a source of drinking water, and for their natural plants and freshwater fish.

“Modern” development practices have severely impacted many of these streams. Impacts include alteration of stream channels through grading operations for roads and houselots, siltation from eroding farm fields and residential subdivisions, trash and debris dumped into stream channels, and “improvement” of major stream channels near the coast by means of concrete-lined, engineered channels.

A coordinated City/State/Federal and Private landowners program is needed for the protection and restoration of Wai`anae’s natural streams and stream corridors. The *Sustainable Communities Plan* should therefore designate, where feasible, all important perennial and intermittent streams and stream channels as special **STREAM CONSERVATION CORRIDORS**. Appropriate State and City agencies then need to work together to initiate a program that will enhance stream flow and protect the natural ecology of Wai`anae’s streams, stream floodplains, and associated plants and animals. This program should include a “no dumping” rule within the Stream Conservation Corridor, requirements for siltation basins or other means of controlling urban and agricultural stormwater runoff, and a program for the restoration of natural vegetation within stream floodplain areas. A community-based “adopt a stream” program could be an important part of this overall stream conservation program.

#### 2.7.6 Preserve All Lands North of Kepuhi Point as Open Space Lands

The Wai`anae Concept includes a general policy that there should be no urban/suburban or resort development, or golf course development, or other type of commercial land development permitted or approved north of Kepuhi Point and north of Mākua Valley. There is a strong community consensus, as well as a general consensus among the responsible State and City agencies, that these lands should be preserved and protected for open space, public access, and public recreation.

The present use of Mākua Valley by the U.S. Army for live fire combat training is not in keeping with this general resource preservation policy. However, it is recognized that the Army’s current use of these lands is an important part of the Army’s mission. It is also recognized that the Army has made considerable efforts in recent years to develop an “ecosystems management program” for these and other Army training lands, and to develop a dialogue with the community concerning public access to cultural sites within Mākua Valley. Military land uses within the Wai`anae District are addressed in detail in the policies and guidelines section of this Plan.

**2.7.7 Restrict Urban/Suburban or Resort Development Makai of Farrington Highway**

Lands makai of Farrington Highway are at present mostly beach parks and undeveloped shore lands. There are also a number of small lot subdivisions, a few apartment buildings in Wai`anae and Mākaha, the Nanaikapono Elementary School in Nanaʻkuli, some small commercial buildings in Wai`anae Town, Wai`anae High School, and the Wai`anae Small Boat Harbor.

Further development encroachment on these coastal lands should not be permitted, with the exception of some very limited redevelopment of small commercial properties in Wai`anae town. The long-range goal should be to return developed coastal lands to public use. Toward that end, the City should act on opportunities to purchase coastal properties when such uses become non-viable due to economic conditions, storm damage, or other causes.

**2.7.8 Plan and Implement Safety Improvements and Beautification Programs for Farrington Highway**

Over the years, Farrington Highway has evolved from a narrow, unpaved coastal roadway into a wide, 4-lane arterial highway that is dangerous in many places for both drivers and pedestrians. Safety improvements, beautification, and, where possible, narrowing of the roadway width are needed to reduce Farrington Highway's negative impact on the community that it is supposed to serve.

Farrington Highway in some ways separates the community from the area's natural resources of sandy beaches and scenic coastline. The narrowing of Farrington Highway to a local roadway with slower speeds and less traffic would help bring the community closer to its beaches and coastline.

**2.7.9 Evaluate the Feasibility of a New Roadway that will Divert Commuter Traffic from Farrington Highway**

Farrington Highway will continue to be congested and dangerous unless a "reliever road" can be provided to carry significant volumes of commuter traffic. A second arterial road would also provide for emergency access and egress at such times as Farrington Highway is closed to traffic due to coastal storms or major auto accidents. Community concerns about a second arterial road focused on the risk of urban development expansion that often results from major transportation improvements.

The WAI'ANAE CONCEPT articulates the long-range VISION for the Wai'anae community and the Wai'anae District. The Concept also serves as the general framework for the more detailed policies, guidelines, and maps, which are presented in the next sections of this document.

### 3. LAND USE POLICIES AND GUIDELINES

This section of the Wai'anae *Sustainable* Communities Plan presents General Policies and Planning Guidelines for the principal types of land use that should be provided for in the District. The Vision for the future of the Wai'anae District described in Chapter 2 will be implemented through the application of these policies and guidelines.

General Policies are statements that express the City's overall philosophy and long-range planning intent with regard to particular land uses. The planning guidelines are more specific statements that are meant to provide guidance to City agencies and other public and private entities in relation to how the planning, design, and implementation of various types of programs and projects should be achieved. Planning guidelines have been provided for those land uses where more detailed physical planning concepts require explanation.

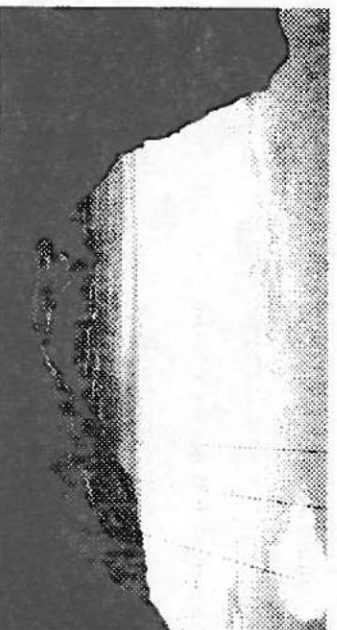
For each major land use type, the presentation of policies and guidelines is preceded by an "Overview" section that provides a summary of important facts and trends relating to that land use type.

## 3.0 OVERVIEW OF LAND USE AND POPULATION GROWTH

Before proceeding with detailed policies and guidelines for the Wai'anae District, it is helpful to summarize key facts pertaining to existing land use, existing State and City designations for land use, and recent population growth trends.

### 3.0.1 General Physical Setting

Wai'anae is an area of great physical beauty. The overall form of the landscape consists of white sand beaches along the coast, a narrow coastal plain, large valleys that extend from 3 to 5 miles inland, and the dramatically eroded, steep walls of the Wai'anae Mountains. The major valleys—



Nānākuli, Lualualei, Wai'anae, Mākaha, and Mākua—are defined and separated from each other by steep-sided basalt ridges, the remnants of the flanks of the great volcano that emerged from the ocean some 3 million years ago. The waters of the Pacific Ocean here are a deep blue, and the offshore currents are strong and often treacherous.

The Wai'anae *Sustainable Communities* Plan area consists of 38,089 acres, which is about 59.5 square miles, almost 10 percent of O'ahu's 602 square miles. Of the eight Development Plan/ *Sustainable Communities* Plan areas, Wai'anae ranks fifth in size—between Ko'olaupoko at 41,279 acres and Ko'olau Loa at 37,060 acres.

The climate of Wai'anae is generally hot and dry along the coastal areas and in the lower sections of the valleys. Cooler and wetter conditions prevail in the upper sections of the valleys and on up into the Wai'anae Mountains. Average annual rainfall ranges from less than 20 inches along the coast to more than 75 inches near the summit of Mount Ka'ala.

Mount Ka'ala, the highest peak on O'ahu at 4,025 feet (USGS), is visible (clouds permitting) from much of the coastal area of Wai'anae.

To many of Wai'anae's residents, this landscape is one of unique grandeur and beauty.

### 3.0.2 State and City Land Use Designations

The State Land Use Classification System currently designates land in the Wai'anae District as follows:

**TABLE 3-1**  
**State Land Use Designations**

URBAN	4,787 acres	13% of the total
AGRICULTURE	15,431 acres	40%
CONSERVATION	17,871 acres	47%
Total:	<u>38,089 acres</u>	

Source: DPP 1997

Lands classified as State Urban are clustered along the coast. The valleys are generally classified "Agriculture," with the exception of Mākaha Valley, which is "State Urban" to a point mauka of Mākaha Valley Estates, about 3 miles inland from the coast. The steep ridges and valley walls, and the Wai'anae Mountains are in the "Conservation" zone.

# DEVELOPMENT PLANS

Sus. Comm. Plan § 3.0.2

The existing City Development Plan Land Use Map for Wai`anae, which was originally developed in 1982 and has since been amended 21 times, largely reflects the existing development pattern and the State Land Use Districts. The DP Land Use Map categories and acreages as of 1997 are summarized in Table 3-2 below.

**TABLE 3-2**  
**Existing DP Land Use Map Categories**

Land Use Categories	Acreage	% of Total	Vacant Acres 1996
Single-Family Residential	1,991	5.2	652
Low-Density Apartment	5	0.02	0
Medium-Density Apartment	70	0.2	0
Commercial	85	0.2	13
Industrial	49	0.1	15
Resort	92	0.2	26
Agriculture	8,777	23.0	5,318
Public & Quasi-Public	531	1.4	-
Parks & Recreation	492	1.3	-
Golf Courses	582	1.5	242
Preservation	12,148	31.9	-
Military	13,036	34.2	-
Undesignated	231	0.5	-
<b>Totals:</b>	<b>38,089</b>	<b>99.7%</b>	

Note: Total less than 100 % due to rounding to nearest 0.0.

Source DPP 1997

It is interesting to note that, of the eight O`ahu Development Plan/*Sustainable* Communities Plan areas, Wai`anae has the second largest acreage of military land (13,036 acres, second only to Central O`ahu with 15,865 acres of military land), the largest percentage of military land (34 percent; with the next highest being Central O`ahu at 23 percent), and more single-family residential acreage (1,991 acres) than the two rural districts of the North Shore (734 acres of single-family residential) and Ko`olau Loa (836 acres) combined.

The City's Development Plan Annual Reports for FY 1996 and FY 1997 indicated that 652 acres of land designated "Single-Family Residential" were vacant/undeveloped. The accompanying "Undeveloped Residential Lands" map shows larger undeveloped parcels located at the following sites:

**TABLE 3-3**  
**Larger Undeveloped DP "Single-Family Residential" Sites**

General Site Description	Approximate Acreage
Mā`ili Kai undeveloped acreage	160
4 Parcels in Mākaha Valley	270

Source: DPP 1997

The balance of the undeveloped "Single-Family Residential Acreage" consists of smaller parcels scattered among the existing older subdivisions. At an average density of 6 units per acre (minimum lot size of 5,000 square feet), the 652 acres would provide about 3,900 new homes.

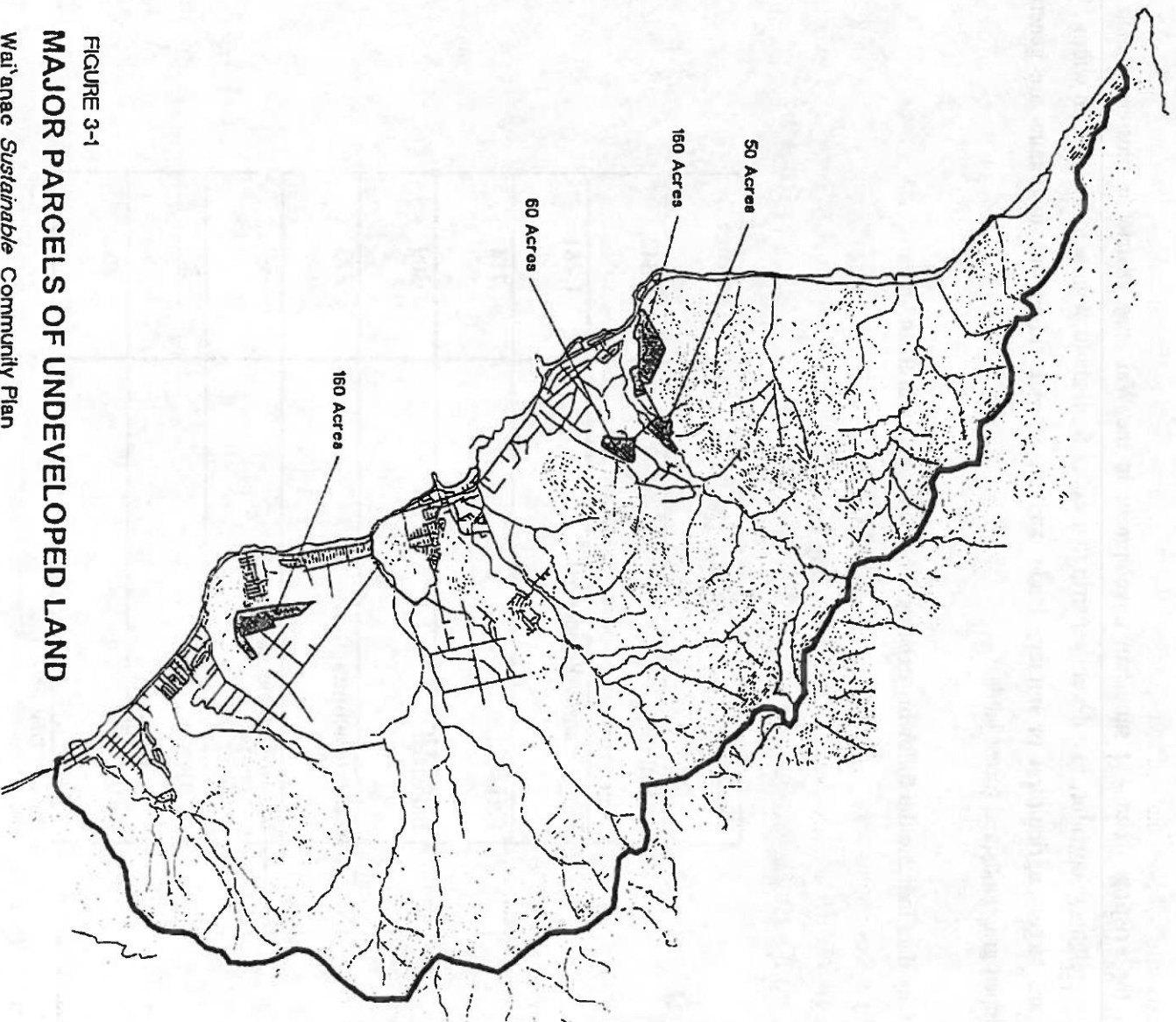
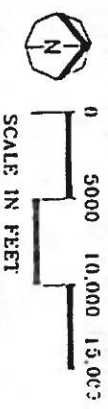


FIGURE 3-1

**MAJOR PARCELS OF UNDEVELOPED LAND***Waianae Sustainable Community Plan*Department of Planning and Permitting  
City and County of Honolulu

April 1999



**3.0.3 Existing Land Use**

Most of the existing urban and suburban development in the Wai`anae District is clustered along the Farrington Highway corridor, in a developed strip that varies from about ¼ mile to 1 + mile in width. The valleys are largely agricultural or military lands, and the steeper ridges and mountains are generally undeveloped grasslands and forest lands.

Recent City data indicate the following existing urban and agricultural land uses:

**TABLE 3-4**  
**Existing Land Use**

<b>Land Use</b>	<b>Acreage</b>
Agriculture	1,842
Single-Family Residential	1,281
Parks	714
Industrial	309
Public Facilities	223
Resort/Commercial	59
Apartment	33
Office	26

Source: DPP 1997

**3.0.4 Mākaha Valley**

Mākaha Valley, one of the major ahupua`a of the Wai`anae coast and an important "subcommunity" with a population of 9,000 + people, presents some unique environmental and land use issues. This beautiful valley, which is about 1,800 acres in area, was one of the population centers from the earliest days of native Hawaiian settlement in this region. In the 19<sup>th</sup> century, these lands were used for ranching, and then for sugarcane

production. Today, Mākaha Valley is the only one of the major valleys of the District that has substantial urban development and resort development. These uses include:

- Sheraton Mākaha resort (closed in 1996)
- Mākaha Valley Towers condominiums
- Mākaha Valley Plantation townhouses
- Mākaha Estates gated community
- Two 18-hole golf courses

The valley also contains, as noted above, four parcels of undeveloped, residentially zoned land totaling approximately 270 acres. Important land use issues for Mākaha Valley include: protection of and access to important cultural sites, including Kaneaki Heiau at the back of the valley, future potential uses of the resort facilities, and the future development of the residentially zoned 270 acres.

### 3.1 BOUNDARY DEFINITIONS

The following boundaries have been established for the Wai`anae *Sustainable Communities Plan*. They generally organize major groupings and types of land uses within the region. Their purpose is to provide one of the primary tools needed for long-term organization and guidance of land use patterns with regard to the primary direction of this plan, which is to preserve the rural landscape of the Wai`anae District and the Country lifestyle of Wai`anae's people.

It is intended that these boundaries will be fixed for the life of the plan, to the year 2020, and that they will help guide future development, redevelopment, or resource management within existing zoning designations or future zoning designations and other standards or guidelines that may be developed in response to plan provisions, other land use permits or entitlements, or in accordance with pertinent policy and character described in this plan.

#### 3.1.1 Rural Community Boundary

The rural community boundary is established to define, protect, and contain communities in areas which the General Plan designates "rural" and which exhibit the physical characteristics of rural lifestyles. The purpose of this boundary is to provide adequate lands for facilities needed to support established communities, to protect such communities from more intense land uses and patterns of development associated with more urban

areas and to protect areas outside the boundary for agriculture or other resource or open space values. Where appropriate, this boundary also contains open space elements, the preservation of which is essential to the character of the rural community being defined. They may include lands designated "park," "agriculture," "preservation," or areas with development-related hazards such as steep slopes or unstable soils.

Rural communities defined by this boundary consist of smaller, more dispersed, less intensively developed residential communities and towns, and minor industrial areas that are smaller than those of urban or urban fringe areas.

Development character is generally low-density, low-rise, small scale, and reflective of a "country" setting. Within residential areas, the landscaping and front yards which provide the foregrounds to their respective residences are the principal visual elements. In commercial areas, the pedestrian environment and associated amenities predominate, and storefronts on both sides of the street are simultaneously perceivable. Buildings are oriented principally toward the street, relate readily to a human scale, and are organized to encourage interaction between the public and private domains.

### 3.1.2 Agriculture Boundary

The agriculture boundary is established to protect important agricultural lands for their economic and open space values, and for their value in helping to give a region its identifiable character. Important agricultural lands include lands currently in agricultural use and lands with high value for future agricultural use. They include lands designated "prime," "unique," or "other" by the "Agricultural Lands of Importance to the State of Hawaii" (ALISH) maps.

The primary use of all lands within these boundaries must be agriculture or uses directly supportive of the agriculture industry. Exceptions include "institutional" uses which must be developed and operated to maintain compatibility with agricultural uses, and other nonrural uses such as waste disposal or quarry sites which must also demonstrate such compatibility. Exceptions to agricultural uses, if any, must conform to the requirements of the City's Land Use Ordinance and to any project-specific conditions that the City may require. The review through the Land Use Ordinance permit process should also consider the high priority on the preservation of agricultural land in Wai`anae, the protection of scenic, natural, and cultural resources and the area's rural quality, more suitable land use categories in Wai`anae, and the availability of lands in other DP or SCP areas.

### 3.1.3 Preservation Boundary

The preservation boundary is established to protect lands that form an important part of a region's open space fabric for their natural, cultural, or scenic resource values. Such lands include important wildlife habitat, archaeological or historic sites, significant landforms or landscapes over which significant views are available, and natural hazard areas. They exclude lands that are located within the rural community or agriculture boundary areas.

#### 3.1.4 Relation to Land Use Map

The Rural Community Boundary is shown on the Land Use Map in Appendix A as a heavy, dashed black line. A thinner solid black line shows the conceptual boundary between agriculture and preservation lands.

## 3.2 PRESERVATION OF OPEN SPACE

### 3.2.1 Overview of Large-Scale Open Spaces, Visual and Scenic Resources

Wai`anae is considered by many people, including both residents and visitors, as one of the most scenic regions of the Island of O`ahu.



The Wai`anae landscape is a large-scale, bold landscape. The major elements of this landscape are the deep blue of the ocean; the long ribbons of white sand beach; the green valleys; the rugged pu`u and ridges along the coast, including Pu`u Heleakala, Pu`u O Hulu, Pu`u Mā`ili`ili`i, and Pāhe`ehe`e Ridge; the steep, harsh side walls of the valleys, and the greener, softer walls at the backs of the valleys; the high peaks of the Wai`anae Range, including Pu`u Kāua at 3,127 feet, Pu`u Kalena at 3,504 feet, and Mount Ka`ala at 4,025 feet.

The large-scale open spaces of the region are not immediately apparent from Farrington Highway, the main coastal roadway. Along most of the highway, residential and commercial development blocks the driver's view of the great valleys of the region. Once people leave the highway and turn up into the valleys, they are greeted with dramatic views of open valley lands and the steep-walled ridges and mountains beyond.

The "Coastal View Study" commissioned by the City Department of Land Utilization and published in 1987 identifies a number of "significant stationary views": from Mākaha Beach Park, Mauna Lahilahi Beach Park, Pōka`i Bay Beach Park, and Mā`ili Beach Park. There are also many dramatic mauka views, and special views from higher elevations looking toward the coast, including spectacular views from the scenic overlook near Kolekole Pass.

Lands north of Kepuhi Point, which marks the northern coastal limits of Mākaha Valley, are largely undeveloped lands. Land uses include beach parks, ranch lands, the Army's training area at Mākua Valley, and extensive areas of State-owned forest lands. The undeveloped, rugged beauty of this part of the Wai`anae coast still provides a sense of what most of the leeward coast once looked like. The ahupua`a of Kea`au, Ohikilolo, Mākua, Kahanahāiki, and Keawa`ula are of great cultural importance to the native Hawaiian community.

In contrast to the dramatic natural beauty of the area, much of the residential and commercial development along Farrington Highway is run down and dilapidated. These man-made elements detract from the scenic qualities of this coastal highway.

Certain types of potential future development would also have an adverse impact on the visual quality of the district, including any further commercial or multifamily housing development on the makai side of Farrington Highway, residential subdivisions replacing valley farmlands, or large lot subdivisions being developed on the lower slopes of the Wai`anae Range.

The open space character and dramatic visual beauty of Wai`anae's shorelands, valleys and mountains must be preserved and protected for the enjoyment of many generations to come.

### **3.2.2 General Policies Pertaining to Large-Scale Open Spaces**

#### **3.2.2.1 Open Space: Priority Value and Consideration**

The preservation of open space and scenic beauty should be a high priority consideration for any and all public programs and projects that may affect the coastal lands, valleys, and mountains of the Wai`anae District.

#### **3.2.2.2 Project Impacts on Open Space to be Addressed**

The environmental impact analysis for any proposed project, whether public or private, that may be planned for coastal, valley, or mountain sites within the Wai`anae District should include a detailed analysis of the project's potential impact on open space and scenic beauty.

### 3.2.2.3 Limits on Urban Development

Future urban and suburban development in the Wai`anae District should be limited to the Rural Community areas, and should not be allowed to intrude into the Coastal area, the Agricultural area, or the Preservation area. The undeveloped open spaces north of Kepuhi Point should be protected and preserved as open space lands in perpetuity. Uses of lands north of Kepuhi Point should be limited to conservation uses, beach parks, limited ranching and low-impact public recreational uses.

### 3.2.3 Relation to Open Space Map

Areas shown as "Agriculture" and as "Preservation" on the Open Space Map generally include the District's large-scale open space resources.

## 3.3 PRESERVATION OF COASTAL LANDS

### 3.3.1 Overview of Coastal Lands

The Wai`anae District has about 20 miles of coastline, measured from the beginning of the District about ½ mile south of Piliokahi Avenue in Nānākuli to the northern end of the District near Ka`ena Point.

About 18 miles of the District's 20-mile coastline are beaches, and most of these beaches are City beach parks with some facilities for beach users. The remaining 2 miles of coastline are rocky ledges and residential coastal development. From south to north, the beach parks are:

- Nānākuli Beach Park
- Ulehawa Beach Park
- Mā`ili Beach Park
- Lualualei Beach Park
- Pōka`i Bay Beach Park
- Wai`anae Kai Military Reservation Beach (U.S. Army)
- Wai`anae Regional Park (active recreation park with coral cliff shoreline)
- Mauna Lahilahi Beach Park
- Mākaha Beach Park
- Kea`au Beach Park
- Mākua Beach Park (state-owned: facilities being planned)
- Ka`ena Natural Area Reserve

There are at least four sections of the Wai`anae shore zone that are experiencing significant chronic erosion: Mā`ili Beach, Mauna Lahilahi Beach Park, Mākaha Beach, and Keawa`ula Bay. The erosion of shores and beaches is a natural process that affects certain coastal areas. Generally, "shore armoring" devices such as seawalls and rock groins are not appropriate solutions to these erosion problems. Shore armoring often results in still more severe shore erosion in areas near the "armored" site.

The coastal lands of the Wai`anae District are important scenic and recreational resources, and must be preserved and protected for the benefit of present and future generations.

### **3.3.2 General Policies Pertaining to Coastal Lands**

#### **3.3.2.1      No New Coastal Development**

There should be no new residential, commercial, industrial, resort or other urban or suburban type of development makai of Farrington Highway, with the exception of new development or redevelopment of low-rise commercial and public buildings associated with the development of Wai`anae Country Town.

#### **3.3.2.2      Incremental Acquisition of Coastal Properties**

The long-range goal for the coastal lands of the Wai`anae District should be the establishment of a coastal zone that is free of urban or suburban development and that is open to public access and public recreation. In working toward this goal, opportunities to acquire parcels or rights-of-way in coastal areas for public use should be pursued, especially lands adjacent to public parks. Any such acquired parcels should be restored to open space and made available to public access and/or public recreational use.

The acquisition of land for the expansion and improvement of Pōka`i Bay Beach Park should be a top priority.

#### **3.3.2.3      Shore Armoring Discouraged**

Shore armoring along any beaches of the Wai`anae District, including seawalls, groins, and breakwaters, should generally be discouraged.

### 3.3.3 Relation to Land Use and Open Space Maps

Coastal Preservation lands are shown on the Land Use and Open Space Maps.

## 3.4 PRESERVATION OF MOUNTAIN FOREST LANDS

### 3.4.1 Overview of Mountain Forest Lands

The important forest lands of the Wai`anae District include the steep ridges and pu`u near the coast and the slopes and peaks of the Wai`anae Mountains that form the backbone and scenic backdrop of the region.

Botanical historians believe that Wai`anae once supported a dryland forest in the lower coastal plain area, grading gradually to wetter forest types in the upper parts of the valleys and the slopes of the mountains, and finally culminating in the wetland forest of the high elevations, with abundant ohia lehua, sandalwood, and associated native plant species.

The natural landscape began to change with the first settlements of Native Hawaiian people here some 800 to 1,000 years ago (Cordy, 1998). Today, little of these natural forest communities remain, except in the highest elevations of the Wai`anae Mountains. The higher elevations of the mountains are still important habitat for rare and endangered plants, as well as for endangered animal species like the Elepaio, a rare forest bird, and the Achatinella tree snail.

Preservation and restoration of these mountain forest lands and forest resources are of great importance to the Wai`anae community and to the people of O`ahu.

### 3.4.2 General Policies Pertaining to Mountain Forest Lands

#### 3.4.2.1 General Preservation Policy

Preserve and protect the Mountain Forest Lands of the Wai`anae District in their natural state.

#### 3.4.2.2 Forest Restoration Program

Coordinate plans and programs towards the restoration of endemic and indigenous forest plants and animals in the Forest Lands of the Wai`anae District.

### **3.4.2.3      City Permitting Powers**

Land use permits should not be granted to any uses of the District's forest lands that may degrade the natural ecology and scenic beauty of these lands.

### **3.4.3 Planning Guidelines for the Preservation of Forest Lands**

#### **3.4.3.1      Protection of Rare and Endangered Species**

Avoid or minimize development and human impacts in areas known to provide important habitat for rare species, especially those that are listed as threatened or endangered species.

#### **3.4.3.2      Preventing the Introduction of Alien Species**

Prevent the introduction of alien plant, mammal, bird, and insect species that could compete with, prey upon, or hybridize with native species. Marine alien species are also becoming a problem that will require coordinated programs to correct.

### **3.4.4 Relation to Land Use and Open Space Maps**

Mountain Forest lands to be preserved are designated as "Preservation" on the Land Use and Open Space Maps.

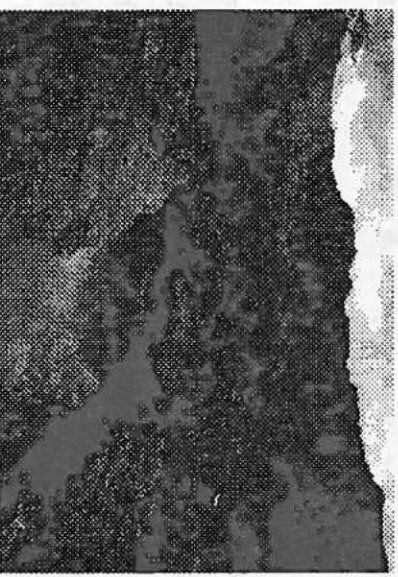
## **3.5      PRESERVATION OF STREAMS AND STREAM FLOODPLAINS**

### **3.5.1 Overview of Streams and Stream Systems**

The streams of the major valleys of the Wai`anae Coast have always been considered a sacred part of the natural landscape. The streams traditionally provided precious fresh water for drinking and agriculture, as well as for other daily uses including bathing and washing.

The major valleys—Nānākuli, Lualualei, Wai`anae, Mākaha, and Mākua—have well-articulated systems of intermittent streams: Nānākuli Stream, Ulehawa Stream and Mā`ili`ili Stream in Lualualei Valley, Kaupuni Stream and Kawiwi Stream in Wai`anae Valley, Mākaha Stream and Makua Stream. In recent years, the makai sections of the streams in Lualualei and Wai`anae Valleys have been replaced with concrete drainage channels.

Descriptions of these streams in the source material label them as "perennial" (flowing all year round) in the upper reaches of Wai`anae Valley and Mākaha Valley, and "intermittent" (flowing only after significant rainfalls) in the lower parts of these two valleys and in the other valleys of the region. Groundwater stored in the high elevation dike-structure of volcanic rocks discharges as seeps and springs that form the "base flow"—the fair weather flow—of the higher level perennial streams. The relative absence of perennial streams here is a reflection of the generally arid climate and the alluvial soils of the valleys, through which the streams become nonvisible "underflow."



The point at which a particular Wai`anae stream changes from perennial flow to intermittent flow depends on a number of natural factors, including:

- The season: with flows stronger during the wetter winter months;
- The year: with flows stronger during wetter years.

During the past 1 million + years, the region's streams have accomplished the immense job of sculpting the slopes of the Wai`anae volcano and forming the deep valleys that we see today. Thus we can see that these streams are powerful shapers of the landscape. However, these streams are relatively small water features, and are vulnerable to the negative impacts of human development.

Negative impacts include runoff from agricultural lands, with sometimes high concentrations of silt, herbicides, pesticides, and farm animal wastes; runoff from urban lands, with herbicides, oils, grease, paint products and other harmful and toxic substances; dumping of trash, broken appliances, old cars, etc.; and various acts of grading and filling that result in faster runoff into area streams, with attendant erosion of natural stream banks. Unfortunately, development which results in damage to natural streambeds often eventually requires the construction of concrete channels



to "manage" the urban runoff. The net result: the natural stream channel and flood plain are completely obliterated.

Wai`anae's streams are important elements of the landscape. They are the natural "arteries" of the valleys, bringing water down into the valleys from the mountains. They are a special environment for fresh water plants and animals, and also provide ribbons of fertile floodplain soils through the predominantly plastic and sticky soils of the alluvial valleys. Healthy streams are an indicator of a healthy landscape; sick streams indicate poor land use practices and uncontrolled agricultural and urban runoff.

### 3.5.2 General Policies Pertaining to Streams

#### 3.5.2.1      Establish Stream Conservation Corridors

Stream Conservation Corridors should be established where feasible as an element of the Wai`anae *Sustainable* Communities Plan. These Stream Conservation Corridors are illustrated on the "Open Space Map" for the Wai`anae *Sustainable* Communities Plan. Appropriate City, state and federal agencies should work with the community to establish a strong, pro-active program for the detailed delineation of Stream Conservation Corridors and the establishment of appropriate and enforceable rules, regulations, fines, penalties, and community monitoring and oversight programs for the protection of streams and stream floodplains.

#### 3.5.2.2      Principal Stream Conservation Corridors

Stream Conservation Corridors should be established where feasible for all significant perennial and intermittent Streams in the Wai`anae District. These streams include the following:

- Nānākuli Stream
- Ulehawa Stream
- Mā`ili`ili`i Stream
- Kaupuni Stream
- Kawiwi Stream
- Mākaha Stream
- Mākua Stream

Existing residential and other development may limit the delineation of Stream Conservation Corridors in some areas. However, these corridors should be established to the fullest extent possible.

### **3.5.2.3 Uses Within the Stream Conservation Corridors**

Uses and activities within these Stream Conservation Corridors should be restricted to natural resources conservation uses and programs, compatible recreational uses such as walking and gathering of native plants and stream animals, and controlled diversion of stream waters for agricultural purposes. Other compatible uses should be permitted as may be defined by the agency with jurisdiction. There should be no dumping, littering, disposal of toxic or hazardous materials, disposal of animal or human wastes, or other activities that may be deleterious to stream quality and stream ecosystems. There should also be no filling, grading, or other significant changes to the natural contours within a Stream Conservation Corridor unless there is an overriding need for such action that relates to public health, safety or welfare.

### **3.5.2.4 Establish Minimum In-Stream Flow Standards**

There is a need to develop a cooperative government-community program toward the establishment of minimum in-stream flow standards for the perennial streams of upper Wai`anae Valley and upper Mākaha Valley. The overall objective of such a program would be to adequately protect fishery, wildlife, recreational, aesthetic, scenic or other beneficial in-stream uses. The setting of instream flow standards would weigh the benefits of instream and non-instream uses of water resources, including the economic impact of restrictions of such uses. The establishment of flow standards is a scientifically and culturally complex process that will require a significant amount of time.

### **3.5.3 Relation to Open Space Map**

Stream Conservation Corridors are schematically shown on the Open Space Map.

## **3.6 PRESERVATION OF HISTORIC AND CULTURAL RESOURCES**

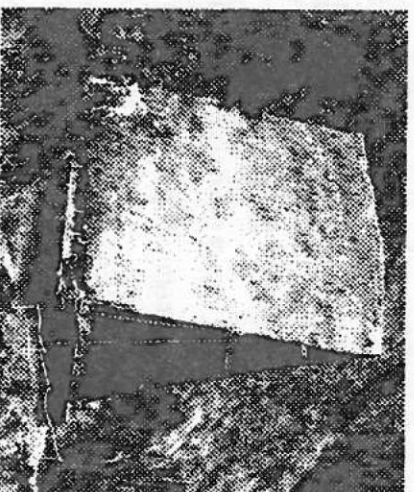
### **3.6.1 Overview of Historic and Cultural Resources**

The Wai`anae area was first settled by Hawaiians about 800 to 1,000 years ago. Almost every valley in the Wai`anae District contains extensive archaeological sites associated with the region's past history. Many of these sites are important to local people as traditional and cultural sites. The upper valleys, beyond the limits of today's housing developments and small farms, have numerous archaeological sites. The coastal dunes contain sites and burials that are hidden beneath the surface of the ground. Sometimes these sites survive under existing buildings; scattered heiau also still survive.

Large-scale archaeological surveys have been completed for upper Nānākuli Valley (conducted by the State Historic Preservation Division), upper Luualaei Valley (by the Bishop Museum), and mid to upper Mākaha Valley (by the Bishop Museum). Other areas of the District have much smaller areas that have been surveyed, or areas where only preliminary reconnaissance information is available. Many areas of the District have not yet been surveyed.

Many of these historical and cultural sites and concentrations of sites are of great importance to the community.

Based on archaeological studies completed to date, the Historic Preservation Division of the State Department of Land and Natural Resources has provided a summary of the important cultural sites and resources of the Wai`anae district, as follows:



Information on archaeological properties in the Wai`anae District varies with survey coverage. Since 1987, most developments have been preceded by an archaeological survey (if needed) as part of the historic preservation laws' review process. Also, the Army and Navy have conducted surveys of their lands. Lands that were developed for housing, schools, businesses, etc., prior to 1987 often were not surveyed, and information on archaeological sites in those areas comes from older 1930 or earlier archaeological studies which usually simply identified heiau. Copies of these reports are on file in the library at the State Historic Preservation Division (Department of Land and Natural Resources, State of Hawai'i). This summary of archaeological information was supplied by the State Historic Preservation Division.

Current models of Hawaiian history have permanent settlement on O`ahu being focused on the wet, windward sides of the island from perhaps A.D. 0 to A.D. 900. During those years, residents of that side of the island often visited the leeward sides to exploit various resources—fishing areas, bird colonies, the shellfish of Pearl Harbor, etc. Small campsites associated with those visits are expected throughout the leeward area. In the Wai`anae District, such a site appears to have been present in Wai`anae Valley along Pōka`i Bay in the Wai`anae Army Recreation Center.

Beginning about A.D. 1000, it appears that the population spread over into the leeward areas of O`ahu, and

people settled into the lower valleys of leeward O`ahu from the 1000s-1300s. Dates from Pearl Harbor, Kalihi, and Mākaha and Wai`anae Valleys all show people were residing in coastal areas and farming the lower valleys.

In the 1300s, oral histories indicate larger countries formed on O`ahu—apparently Kona district (Honolulu), Ko`olaupoko/Ko`olau Loa, and Ewa (with Wai`anae and Waialua) were the three countries which formed. This marked the start of more complex and more stratified societies. By the 1400s, the entire island was unified. Large heiau in the islands started to be built in the 1400s, based on archaeological information, and large fishponds also began to be built by this time—all evidence of more stratification and countries with larger populations. From the 1400s-1700s, population grew on the island. People spread up into the upper valleys, where scattered houses and fields were found. In the 1700s, oral histories show that O`ahu expanded to control all of Moloka`i and parts of Kaua`i. But, the O`ahu kingdom fell to Maui in 1783, and Maui fell to the Hawai`i Kingdom in 1795. Throughout these years, Wai`anae district was probably distant from the ruling centers of the O`ahu and later kingdoms—which were primarily in Waikiki, the Ewa area, and in Kailua. But, within Wai`anae, Wai`anae Valley was the political and religious center of the area. The high chief controlling much of the area had a residence in Wai`anae Valley (where the ruler resided when passing through) and large national sacrificial temples (luakini) were present in Wai`anae (with one also in Mākaha). All of the Wai`anae lands filled in during these years, with farms covering the land up into the uppermost valleys, and with houses scattered among these farms.

Almost every valley in Wai`anae District today still contains archaeological sites associated with O`ahu's and Wai`anae's past history and life. The upper valleys, beyond the end of today's houses, are nearly all covered with archaeological sites. The coastal dunes contain sites (including burials) which are hidden under the ground surface. Sometimes these sites survive under existing buildings and scattered heiau still survive. The only fairly complete large archaeological surveys that have been done are in upper Nānākuli (done by the State Historic Preservation Division), in upper Luualaei (done by the Bishop Museum), in mid to upper Mākaha (done by the Bishop Museum), and on the coastal flats of Kea`au (done by International Archaeological Research Institute, Inc.). Other areas of the district have much smaller areas, which have received complete coverage, or areas where only initial reconnaissance information is available. And many areas of the district have as yet to undergo archaeological survey.

### **3.6.2 Policies Pertaining to Historic and Cultural Sites**

#### **3.6.2.1      Preservation of Major Concentrations of Cultural Sites**

The large concentrations of historical and cultural sites found in the upper reaches of the valleys of the Wai'anae District are included in the Preservation areas. These important cultural landscapes should be preserved and protected for the benefit of the community and of future generations. Careful restoration of important sites should be undertaken by qualified professionals.

#### **3.6.2.2      Preservation of Other Important Sites**

Other important historical and cultural sites not located within the Preservation areas should also be recognized and protected wherever possible. Urban or agricultural development projects should not be permitted to degrade or destroy important historical or cultural sites. "Important historical and cultural sites" should be determined by the State Historic Preservation Division in collaboration with the community.

### **3.6.3 Planning Guidelines for the Preservation of Historic and Cultural Sites**

#### **3.6.3.1      Sites on City-Owned Lands**

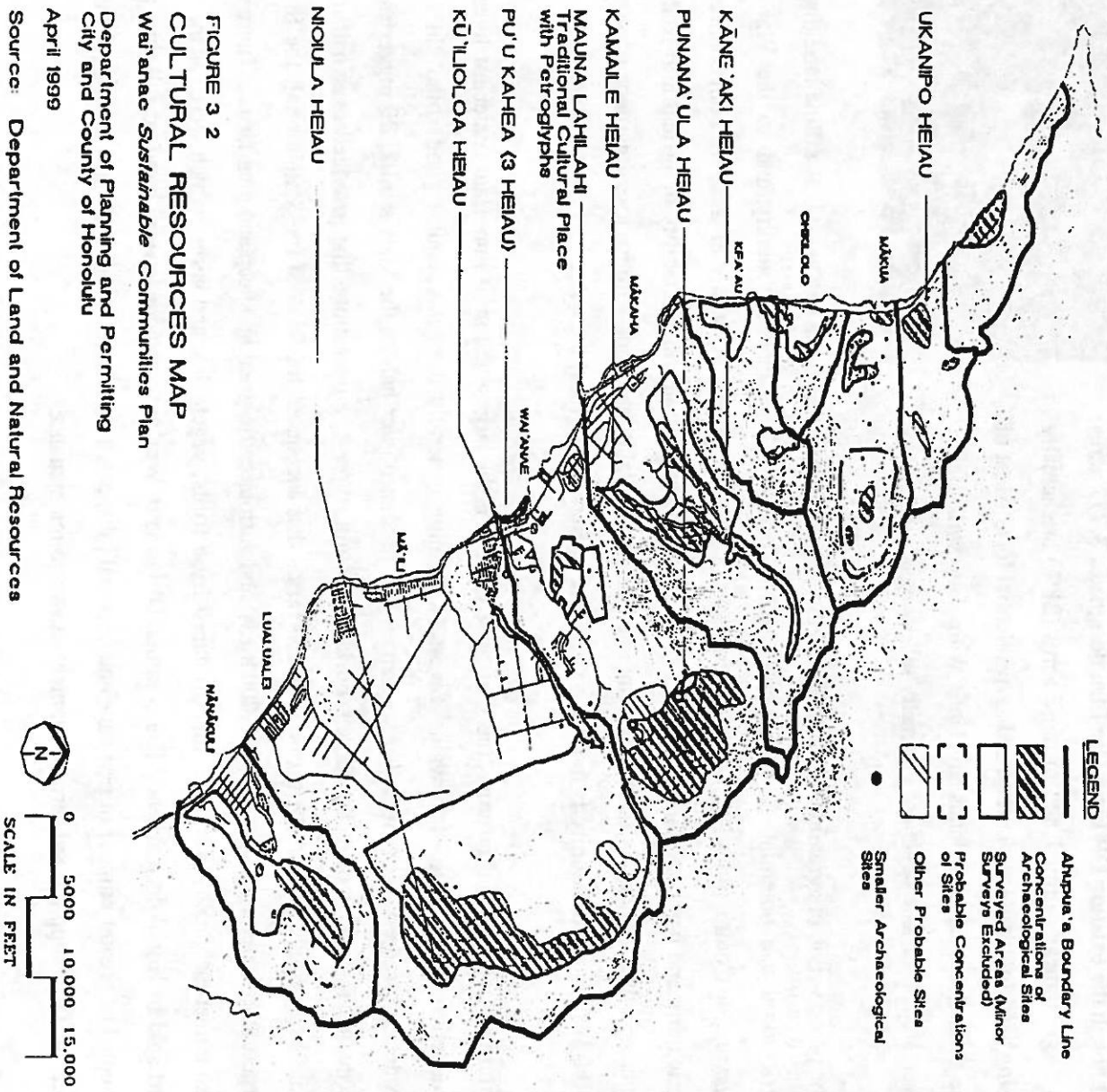
Plans and programs are needed for the protection of important historical and cultural sites found on City-owned land within the District—which is primarily in Mākaha Valley. These programs should include provisions for community access to important sites for the observance of cultural practices, and involvement of members of the community in the protection and preservation program.

#### **3.6.3.2      Sites on Federal, State, or Private Lands**

For lands owned by Federal or State agencies, or owned by private parties, the appropriate public agencies should develop pro-active and cooperative efforts to preserve and protect these important sites and provide for community access. The program for community access to important sites in Mākua Valley that has been initiated by the U.S. Army is an important example of this kind of effort. The State Department of Land and Natural Resources is also beginning to develop a community-based management program to better protect resources of the Wai'anae Kai Forest Reserve. Similar community access and forest management programs involving the U.S. Navy for sites in Luahalei Valley, the State Department of Land and Natural Resources for sites in Ohikilolo Valley and other state-owned areas, and the Department of Hawaiian Home Lands in Nānākuli need to be developed.

### **3.6.4 Relation to Open Space Map**

Major concentrations of archaeological sites are shown with a "dot screen" texture on the Open Space Map.



### 3.7 PRESERVATION OF AGRICULTURAL LANDS

#### 3.7.1 Overview of Agricultural Lands in the Wai`anae District

Although the existing DP Land Use Plan designates 8,777 acres as "Agricultural", only 1,842 of these acres (21%) are actually being used for active agriculture and ag/residential lots. Most of the unused agricultural lands are lands with poor soils and/or steep slopes. These lands are generally fallow grasslands.



The preservation of agricultural lands—both lands currently in agricultural use as well as fallow land that has agricultural use potential—is of critical importance to the Wai`anae community and to the Wai`anae *Sustainable Communities Plan*. Agricultural uses of the land are important in Wai`anae for both commercial agriculture and part-time family farming. The continued protection and availability of agricultural lands for commercial farms, family farms, part-time farmers, and rural homesteads with backyard gardens is essential if the Wai`anae community is to have a chance at preserving its rural lifestyle.

In terms of commercial farming, the Wai`anae District is the largest and most important center for livestock production in the State of Hawaii. Livestock farming generally does not require good soils. In 1997, production in the District included six dairies that produced over half of the State's milk, 20 piggeries that accounted for over half of the State's pork production, three egg operations that provided over half of the State's egg production, three broiler chicken farms that accounted for 98% of the State's total, the State's largest pullet operation with about 50,000 birds, and various cattle-grazing, sheep and goat farms. There were also numerous small truck farms that produced fresh fruits, vegetables, and herbs, which were for the most part sold to Honolulu markets. The commercial farms in Wai`anae provide several hundred full time jobs, an equal or greater number of part-time and seasonal jobs, and a significant number of farm-related jobs in the areas of farm supplies and farm equipment sales and maintenance.

Part-time family farms—"subsistence agriculture" or "recreational farming"—are also an important part of Wai`anae's landscape and lifestyle. There are an estimated 200 one- to two-acre parcels where some farming is currently being practiced.

**Issues**

The following issues present challenges to the long-term protection of agriculture lands and the development of diversified agriculture:

**Taxes:** Current taxes on land used for diversified agriculture are high, presenting economic challenges to the development of diversified agriculture enterprises, and hence challenges to the development of a diversified agriculture industry.

**Conversion to More Intense Uses:** The cost of maintaining lands in agriculture use, the costs versus revenues involved in developing diversified agriculture enterprises, and the potential for higher economic return if lands are committed to more intense uses such as residential or commercial development all help to create pressures to convert agricultural lands to other uses.

**Lack of Long-Term Leases:** This makes agricultural lessees reluctant to invest in long-term improvements such as infrastructure or needed support facilities, and makes it difficult to obtain financing.

**Water Availability:** Uncertainty about long-term water availability at affordable rates contributes to the economic challenges to diversified agriculture development.

**Use Conflicts:** Development of new communities, residential areas, or institutional facilities such as churches or schools adjacent to or within agricultural areas has resulted in complaints directed at the agriculture activity.

**Lack of Incentives:** There are no strong incentives for protection of agriculture lands or for the development and maintenance of diversified agriculture enterprises.

**Proposed Solutions:** Proposed solutions, many of which must be further researched and developed, fall into two categories: Protection and Incentives. They are:

**Protection**

1. *Community and Agriculture Boundaries.* These boundaries are fixed for the life of the plan; they contain community development and protect agricultural resources.

2. *Land Use Regulations.* Require that all uses on lands designated agriculture be primarily agricultural.
3. *Agriculture Easements.* Acquire easements designed to protect agricultural lands in perpetuity by purchase or other means.
4. *Farmland Trusts.* Place agriculture lands in a long-term "trust" program that ensures their primary use as agriculture.
5. *Development Rights Transfer.* This program could be used to transfer development rights from agriculture lands to "receiver sites" within the Rural Residential area. Transfer of Development Rights could thus be used to protect and conserve agriculture and open space lands.

#### Incentives

1. *Tax Incentives:* Studies should be conducted to identify and develop tax programs or other measures which effectively protect agriculture lands and promote agriculture industry development. They would include:
  - a. Tax Structure Developments: Revise the tax structure to facilitate and encourage pursuit of diversified agriculture enterprises.
  - b. Tax Incentive Zones or Programs: Additional tax reductions or credits to promote the initiation and development of new agricultural enterprises.
2. *Agricultural Subdivision:* Develop and implement a way to "subdivide" agriculture lands on paper that would facilitate a lessee's ability to obtain a mortgage on the land.
3. *Affordable Water:* The creation of affordable water sources and the development of affordable agriculture water rates.

Development and *Sustainable* Communities Plans should include policy language to encourage and support farmers and agricultural uses by the provision of affordable irrigation water which may include possible assistance by the Agribusiness Development Corporation to develop water facilities, possible use of reclaimed water from wastewater treatment plants where it is feasible, consideration by the City to modify the fee structure for new water services related to water meters and lines, and assistance from other agencies such as the USDA Farm Service Agency.

4. ***Right-to-Farm Programs.*** Would protect a farmer's right to farm land if such activity does not physically endanger resources or adjacent uses.

### 3.7.2 General Policies Pertaining to the Preservation of Agricultural Lands

#### 3.7.2.1 Establish a Boundary for Important Agricultural Lands

The Wai`anae *Sustainable* Communities Plan Land Use Map establishes a boundary for Agricultural lands. The agricultural lands generally lie between the coastal "Rural Community" areas and the steep lands of the "Preservation" areas. The intent is to preserve active farms as well as Agricultural lands that contribute to the open space and rural character of Wai`anae and provide areas for the potential expansion of agricultural activity. The Rural Community Boundary would contain urban development and prevent the encroachment of residential and commercial development into agricultural areas.

#### 3.7.2.2 Compatible Land Uses

Land uses within the Agricultural area are to be limited to agriculture and other uses that are compatible with a rural landscape and country lifestyle. Compatible uses include uses such as farm dwellings, existing small country stores, small-scale facilities for the storage or processing of farm products, and cultural places and preserves. The more detailed Land Use Ordinance (LUO) should govern the detailed determination of compatible and incompatible uses in Agricultural areas. Other potentially appropriate uses include recreational or educational programs or other uses consistent with the character of a rural agricultural area, which provide supplemental income necessary to sustain the primary agricultural activity. There should be a direct connection between those activities and the maintenance of agricultural uses on the same or nearby properties.

#### 3.7.2.3 Incompatible Land Uses

New residential subdivisions with lot sizes less than two acres, new commercial uses, public and private

schools, congregate housing or elderly care homes, golf courses, resorts, theme parks, and other forms of large-scale commercial or industrial development should generally not be permitted in the Agricultural area. Large lot subdivisions intended for luxury homes with no bona fide agricultural activities are also not a compatible land use.

#### **3.7.2.4      Zoning and Tax Assessments**

The City should use its powers of zoning and real property tax assessment in a manner that will support the preservation of agricultural lands and agricultural uses in the Wai`anae District.

### **3.7.3 Planning Guidelines for the Preservation of Agricultural Land**

#### **3.7.3.1      Farmers' Markets and Other Low-Cost Marketing Outlets**

Various public and private entities should coordinate their efforts and resources with community groups to create more opportunities for local family farmers to get their farm products to market at the lowest possible cost. The larger commercial farmers that are active in the Wai`anae District have well established marketing channels for their poultry, eggs, pork, and milk. The small farmers and family farmers, however, have fewer opportunities to market their products. Local "Farmers' Markets," if well organized and held regularly, could provide low-cost marketing opportunities for small farmers. Other low-cost marketing concepts, including co-operatives, should also be explored.

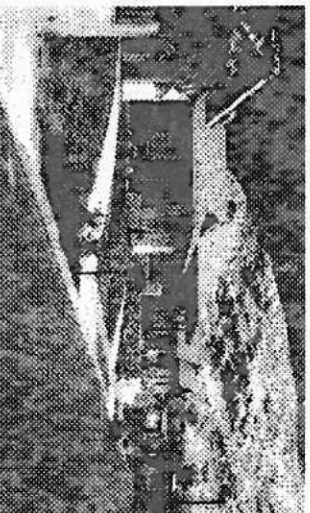
#### **3.7.4 Relation to Land Use and Open Space Maps**

Agricultural land that should be protected and preserved is shown as "Agriculture" on the Land Use and Open Space Maps. Included in this land use category are most of Lualualei, Wai`anae and Ohikilolo Valleys, and portions of Nānākuli and Mākua Valleys.

### **3.8 RESIDENTIAL LAND USE**

#### **3.8.1 Overview of Existing and Planned Residential Uses**

Existing residential land uses in the Wai`anae District consist of about 1,281 acres of single-family residential development and 33 acres of multifamily housing. These developed lands support a total of about 12,000 dwelling units, mostly clustered



along the Farrington Highway coastal corridor. "Medium Density" residential development is found on two sites in Mākaha Valley: Mākaha Valley Towers condominiums and Mākaha Valley Plantation townhouses. The combined residential acreage of 1,314 acres, computed against the 12,000 dwelling units, yields an average density of 9.13 units per residential acre. This is a high density for a "rural" district like Wai`anae. As a comparison, the overall gross density of the Villages of Kapolei planned community in the Ewa District, with about 3,500 single-family homes and 1,500 multifamily units, is about 10 units per residential acre.

1990 Census data for housing units in the Wai`anae District showed that the Median Year Built for the District's homes was 1971, the median value was \$136,200 as compared to the O`ahu median value of \$281,500, and the median gross rent was \$602 a month, as compared to O`ahu at \$663/month. About half of the units were owned and half were rented.

**TABLE 3-5**  
**Housing Trends in the Wai`anae District: 1980 to 1990**

Housing Data Category	Wai`anae 1980 Data	Wai`anae 1990	% Change
Occupied Units	9,528	10,680	12.1
Owner Units	4,090 (42.9%)	4,879 (45.7%)	19.3
Renter Units	3,874 (40.7%)	4,538 (42.5%)	17.1
Median Year Built	1974	1971	
Median House Value	\$77,000	\$136,200	76.9
Median Gross Monthly Rent	\$264	\$602	128
Median Rent as % of Income	20.0	30.1	50.5

An analysis of housing data from the 1980 and 1990 Census' shows a number of interesting trends. As noted previously in this report, Wai`anae's population growth during this period, an increase of 5,924 people representing an 18.8 percent growth, was larger than the increase in the number of occupied housing units, which was only 1,152 units, or 12.1 percent. This disparity between population growth and the increase in the number of occupied units suggests a trend towards larger households—and more overcrowding—and/or more homeless people.

In 1990, Wai`anae had a slightly lower percentage of homeowner units and a slightly lower percentage of renter units when compared with O`ahu overall. Housing units in Wai`anae were slightly "newer" than the O`ahu average, and median rents were slightly lower. However, median rent as a percent of income was

somewhat higher for Wai`anae than for O`ahu. The median house value in Wai`anae was much lower than the O`ahu median.

**TABLE 3-6**  
**Housing Data for 1990: O`ahu vs. Wai`anae**

Housing Data Category	O`ahu 1990	Wai`anae 1990
Occupied Units	281,683	10,680
Owner Units	137,893 (49%)	4,879 (45.7%)
Renter Units	127,411 (45.2%)	4,538 (42.4%)
Median Year Built	1968	1971
Median House Value	281,500	136,200
Median Gross Monthly Rent	663	602
Median Rent as % of Income	27.6	30.1

The Department of Planning and Permitting's data on housing developments since 1990 show the following for Wai`anae:

1990:	10,680 units	
1995:	11,530 units	(increase of 850 units = average of 142 units/year)
1996:	11,981 units	(increase of 451 units in one year)

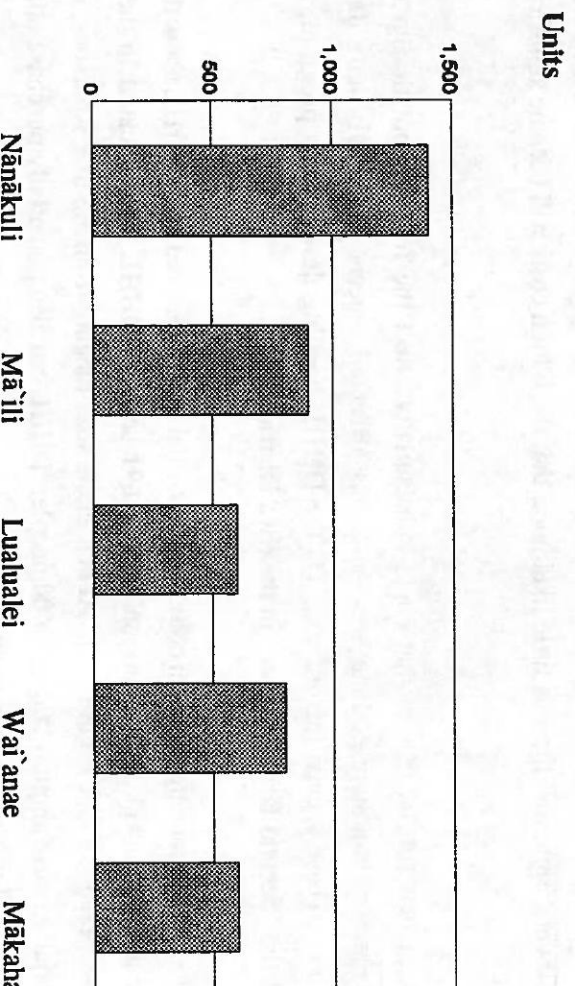
The sharp increase in units for 1996 was primarily due to two relatively large projects that sold a significant number of units in that year: DHHL's "Princess Kahanu" project, and Schuler Homes' "Mā`ili Kai Phase 1" project.

The net increase in housing units in Wai`anae for the period 1990 through 1996 was thus 1,301 units—which already exceeds the net increase of occupied units during the 1980 to 1990 period of 1,152. If 1996 is considered an "atypical" year, and if it is assumed that the rest of the decade, from 1997 through 1999 inclusive (3 years) will see a net increase in the housing stock of about 140 units per year, or a total of another 420 units, the total increase of housing units during the 1990's will be about 1,720 units. At an average family size of 3.9 persons, 1,720 units would accommodate 6,708 people. At a smaller average family size of, say, 3.5 persons, 1,720 units would accommodate 6,020 people. If the net increase in housing units is larger than the estimated 1,720 units, then the potential population increase could exceed 7,000 people. As earlier noted, some percentage of people occupying the new homes are Wai`anae families that had been doubling up with other families.

Planned housing projects as of June 1998 are summarized as follows: about 900 units in Nānākuli Valley, 500 units at Luualalei/Voice of America site, 1,000 units at Mā`ili Kai, 150 units at the Village of Pōka`i Bay in lower Wai`anae Valley, and 600 units at Mākaha Valley Retirement Community.

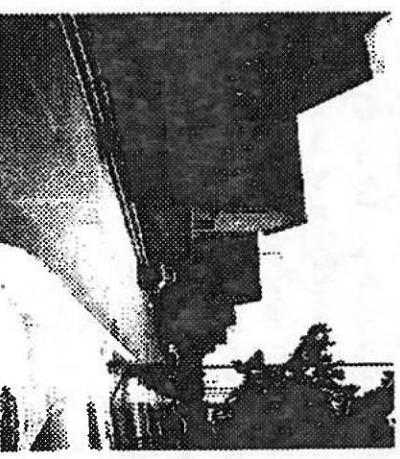
The Department of Planning and Permitting's forecast for housing increases by subcommunities for the period 1990 to 2020 is:

-Nānākuli:	1,431 units
-Mā`ili:	897 units
-Luahalei:	710 units
-Wai`anae:	841 units
-Mākaha:	568 units
<b>Wai`anae Total Increase by 2020: 4,447 units</b>	



These forecasts are roughly in line with the major planned projects that were known as of June 1998.

Given past owner/renter trends in Wai`anae, it appears that about one-half of any new units should be for owner occupants and about one-half should be for renters. Affordable house prices and affordable rentals will be needed. According to affordability numbers provided by the Housing Finance Development Corporation (HFDC) for 1997, an "affordable home" for a family of 4 persons with an income of 80 percent of the O`ahu median income, assuming financing at 7.5 percent, would be priced at \$142,700. Affordable Rentals, based on 30 percent of income and including utilities, for a family with income of 80 percent of the O`ahu median, would be \$1,189/month for a 3-bedroom unit.



For Wai`anae, the typical 1998 for-sale house price, including land, was in the range of \$200,000 to 250,000,

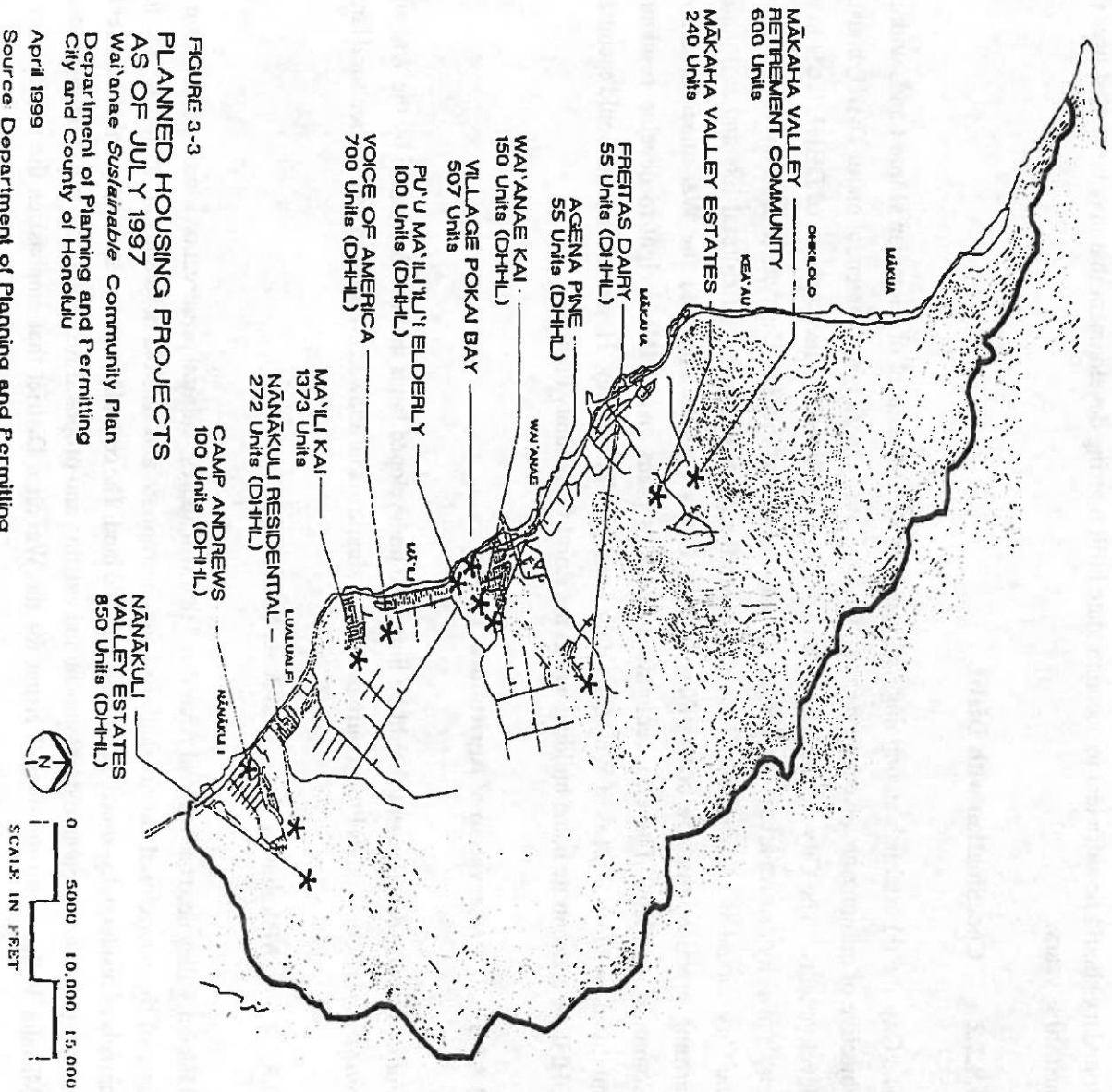
and the typical rent for a 3-bedroom unit is in the range of \$800 to 1,000. Thus, for Wai`anae, house prices were higher than HFDC's affordability guidelines, but rents were lower. For many Wai`anae families, however, these rent levels were still very high.

Housing affordability is a critical issue throughout the State of Hawai`i, and the need for affordable housing is especially acute in lower income areas like Wai`anae. The 1980's were a period of accelerating housing prices throughout the State. By 1990, the median price for a single-family home on O`ahu was over 300 percent of the national median price. The 1990's have generally been a period of economic stagnation for Hawai`i, and housing prices have declined from the peak levels of 1989-1990. However, housing costs in Hawai`i are still very high, and there is little likelihood that these high costs will become significantly lower in the future.

There are at least two special factors that could substantially affect the future population growth of the Wai`anae *Sustainable Communities* Plan area—and thus affect all aspects of the District's development, including housing. These special factors are: (1) the DHHL housing development program, and (2) the development of the "Second Urban Center" in the Ewa District.

The impact of the DHHL housing program could be substantial. Data received from DHHL show the potential development of approximately 1,700 units on about 1,691 acres of DHHL lands located in the Wai`anae District from the Year 1999 (see Figure 3-3). At household sizes ranging from 3.5 to 3.9 persons, these 1,700 units will potentially house about 6,000 to 6,600 people. DHHL can also potentially purchase other lands in the Wai`anae District for housing development.

The neighboring district of Ewa, and the planned development of the City of Kapolei may have a major impact on the Wai`anae District's population, housing resources, and land use. The City government is strongly committed to the development of the City of Kapolei, especially in terms of the creation of new jobs at Kapolei, with hopefully an accompanying easing of commuter traffic to downtown Honolulu. However, assuming that the City of Kapolei does develop as planned, housing prices there will probably escalate faster than the O`ahu average, and more pressure will be brought to bear on nearby, lower cost housing markets like Waipahu to the east and Wai`anae to the west. It is likely that there will be many more "affordable" housing projects like the Mā`ili Kai project proposed for development. Wai`anae could thus become the "low cost" bedroom community for the City of Kapolei.



### 3.8.2 General Policies Pertaining to Residential Lands

#### 3.8.2.1 Residential Acreage

For the foreseeable future, there should be no increase in lands designated for *Sustainable Communities Plan* "Residential" in the Wai`anae District. Existing undeveloped lands within the Rural Community Boundary should be sufficient to accommodate infill housing development that may be needed over the next 20 + years.

#### 3.8.2.2 Coordination with DHHL

The City should establish an ongoing dialogue with the Department of Hawaiian Home Lands with the objective of minimizing adverse impacts on the Wai`anae District from potential major DHHL housing developments. The City should work with DHHL to facilitate the development of DHHL lands in the City's priority growth areas: the Primary Urban Center and the Ewa District. In the Wai`anae District, the City should work with DHHL to encourage the development of agricultural lots and *sustainable* farming practices that are compatible with the City's General Plan and the Wai`anae *Sustainable Communities Plan*. The City recognizes DHHL's plans and DHHL's right to develop residential subdivisions in rural areas of Wai`anae Valley and Nānākuli Valley. However, the City should encourage DHHL to concentrate home building within the Rural Community boundary.

#### 3.8.2.3 Preservation of Agricultural Lands

Future housing development should be limited to undeveloped lands that are designated by the Wai`anae *Sustainable Communities Plan* for urban use, and should not be allowed to encroach upon agricultural lands.

#### 3.8.2.4 Mākaha Valley Special Area Plan

Mākaha Valley needs a "Special Area Plan" that will address cultural preservation issues, potential future uses of the now closed Resort facilities, and appropriate and feasible development options for the four parcels of residentially-zoned, as yet undeveloped land. The central planning issue that should be addressed is how to balance economic development and existing and proposed residential and resort development in Mākaha Valley, with the overall vision for the Wai`anae District that emphasizes the preservation of agriculture and open spaces.

### 3.8.3 Planning Guidelines for Residential Development

#### 3.8.3.1 Height of Residential Structures

Residential building heights should generally not exceed two stories or 30 feet, including the roof form, with heights above 30 feet allowed only when necessary due to the required flood elevation, steep slope of the site, or the desire to protect important natural features.

### **3.8.3.2 Rural Residential Subdivision Standards for Roads and Utilities**

The City should utilize more flexible and appropriate subdivision standards for roads and utilities in rural residential subdivisions. For example, current City Subdivision Rules and Regulations require curb/gutter/sidewalk for most new subdivisions. These standards are essentially urban or suburban standards, but do not make sense for most “Country” subdivisions with one-acre lots or for subdivisions with R-20 or R-10 zoning located in rural areas. More appropriate standards for rural residential subdivisions would be 20- to 24-foot roadways with grass shoulders, provided that adequate site drainage can be achieved without urban style “curb/gutter/sidewalk” and underground drain lines. These simpler standards would mean less cost for the development of these subdivisions, and thus more affordable lot prices for local families. The simpler standards would also be more in keeping with Wai’anae’s rural character.

### **3.8.3.3 Clustered Housing in Wai’anae Country Town**

Encourage the development of clustered housing in the vicinity of designated Wai’anae Country Town. Public agencies could provide incentives to landowners in the form of infrastructure improvements in the Country Town; the provision of public amenities including parks, gathering places, and main street landscaping; and special abatements for real property taxes. Clustered housing would help to create a people-oriented Country Town, where more residents could easily walk to local shops, stores, and service businesses. In the context of the Wai’anae District, “clustered housing” does not mean high-rise or even mid-rise structures. Small lot single-family housing, duplex homes, townhomes, and other types of residential structures can be constructed at densities from 10 to 20 units per acre. The traditional configuration of apartments over first floor commercial spaces should be brought back to the Wai’anae Country Town. These somewhat higher densities could result in housing for a population of up to several thousand people within a 10-minute walk.

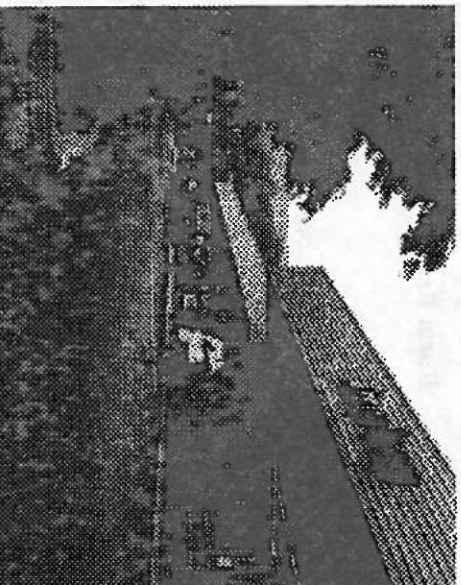
### **3.8.4 Relation to Land Use Map**

Residential lands are part of the “Rural Community Development” lands illustrated on the Land Use Map. These development lands are bounded by the “Rural Community Boundary,” and include existing residential uses, small-scale commercial and industrial uses, institutional uses, and undeveloped residentially-zoned lands suitable for “infill” development. Also included in this land use designation are as yet undeveloped Residentially-zoned lands in Mākaha Valley.

### 3.9 COMMERCIAL AND INDUSTRIAL USES

#### 3.9.1 Overview of Commercial and Industrial Uses

Wai`anae's retail commercial and industrial areas generally serve the needs of the resident population: Wai`anae does not contain "destination retail" centers like the Waikole Power Center in Central O`ahu or Ala Moana Center in Honolulu, or "regional industrial" centers like Campbell Industrial Park in Ewa. Māhaha Resort, which closed in 1996 because of chronically low occupancy levels, served as the area's only significant destination resort area. During the 1970's and 1980's, this resort provided as many as 300 jobs, many of them filled by Wai`anae residents.



In keeping with the overall theme of a "rural Wai`anae," the General Plan does not foresee significant growth in commercial or industrial land use for this area. The projected growth in population may create a need for more support retail commercial and industrial acreage, although recent trends indicate a shifting of shopping habits away from local stores to the larger commercial centers in the Ewa District. Some local leaders have voiced the need for more local industrial parks. The potential size, financing, and tenant mix of any such industrial parks, however, have not been thought out in any detail.

Local small businesses and light industrial operations are an important source of jobs for Wai`anae's people. A healthy level of small local businesses is essential for the local economy and also lessens the volume of commuter traffic that causes severe congestion on Farrington Highway during morning peak traffic periods.

#### 3.9.2 General Policies Pertaining to Commercial and Industrial Uses

##### 3.9.2.1 Encourage the Continuation of Existing Commercial Establishments

Encourage the continued viability of the District's existing commercial businesses, including the many small neighborhood retail stores and restaurants as well as the larger commercial centers like Wai`anae Mall and Nānākuli Shopping Center. Parcels already zoned for commercial use should continue to be zoned commercial.

##### 3.9.2.2 Encourage Commercial Businesses that Serve the Community

Encourage the establishment of appropriate commercial businesses that will provide jobs and goods and

services in the Wai`anae District, especially within the designated Country Town and Village Center areas. Public agency actions in this area may include the approval of appropriate commercial zoning, provision of infrastructure, beautification of main streets, tax abatements, technical assistance, training in small business management, grants and loans. Commercial businesses should be allowed only in the Rural Community areas, except for those small-scale country businesses that are compatible with agricultural land uses.

### **3.9.2.3 Encourage Light Industrial Businesses**

Encourage the establishment of light industrial businesses that provide jobs for local people, and that are generally compatible with the predominantly residential uses of the Rural Community areas along the coast, but not in Makaha Valley. Light industrial uses should be allowed only in the Rural Community areas. Special areas such as the Wai`anae Small Boat Harbor may provide opportunities for ocean-related light industrial and research uses.

### **3.9.2.4 No Heavy Industry**

Heavy industrial uses should not be permitted in the Wai`anae District. Such uses should be sited in the Campbell Industrial Park in Ewa.

## **3.9.3 Planning Guidelines for Commercial and Industrial Uses**

### **3.9.3.1 Planning and Design Guidelines for Neighborhood Commercial Establishments**

Neighborhood commercial establishments in the Wai`anae District typically consist of one to several buildings that are one or two stories in height, with associated parking areas. The two main shopping centers, Nānākuli Shopping Center and Wai`anae Mall are not included in this classification of "Neighborhood Commercial." The scale of neighborhood commercial buildings is generally compatible with the surrounding residential land uses. Planning and Design guidelines for any future new neighborhood commercial buildings thus include the following:

- Buildings should be residential in scale: Height, size, and massing of the building should be compatible with adjacent residential structures.
- Total floor area of any building should not exceed 10,000 square feet.
- Building forms and roof lines should incorporate some design variation in order to avoid large uniform walls or large roof plates.
- Exterior materials and colors should be compatible with those used in adjacent residences.
- Access to parking and loading areas should be from an arterial or collector street.

- Storefronts should be oriented to pedestrian ways, with parking in the rear of the commercial buildings.
- Parking and loading areas should be screened from nearby residential areas and from the street.
- Lighting and signage should be relatively low key so as to avoid conflict with nearby residential areas.

#### **3.9.4 Relation to Land Use Map**

Most of the District's existing commercial and industrial uses are small in scale and are therefore included within the general designation of "Rural Community Development." One significant industrially-zoned area in the vicinity of the Wai`anae wastewater treatment plant is shown as "Industrial."

### **3.10 COUNTRY TOWNS, RURAL COMMUNITY COMMERCIAL CENTERS AND GATHERING PLACES**

#### **3.10.1      Overview of Concepts for Country Towns, Rural Community Commercial Centers and Gathering Places**

Within the RURAL COMMUNITY area for each of the subcommunities of Nānākuli, Lualualei, Wai`anae, and Makaha, there is the need for the development of more strongly defined **local commercial and service centers**. These Centers should contain a concentration of small retail businesses, restaurants, professional offices, and social service offices and agencies. They could also contain some clustered multifamily and single family homes, including housing units constructed above ground-level commercial space. Heavy Industrial uses should not be permitted in these Centers. This more efficient development pattern would provide for a stronger local community identity, further reinforce the concept of the ahupua`a, encourage more pedestrian traffic and less dependence on cars, support small local businesses, and alleviate the strong linear development pattern that presently exists along Farrington Highway.

There is also a need for the development of **Community Gathering Places**. These Gathering Places should be park-like areas of several acres that would be managed and maintained by a community organization. People would gather here informally to visit and talk story; have parties and celebrations; stage festivals and special events; teach and learn traditional crafts, music and dance; buy, sell, and barter homegrown produce and homemade items; and renew contact and communication with friends and neighbors. The Community Gathering Places should generally be located close to but not within the more commercially-oriented Commercial Centers.

The Wai`anae *Sustainable Communities* Plan thus designates the existing commercial center of Wai`anae Town as a "Country Town." Smaller "Rural Community Commercial Centers" are designated for the communities of Nānākuli, Lualualei/Mā`ili, and Makaha. Community Gathering Places are also schematically shown on the Land Use Map for all of these communities.

### **3.10.2 General Policies Pertaining to Country Towns, Rural Community Commercial Centers and Gathering Places**

#### **3.10.2.1 Phased Development Program**

A program should be established for the phased development and improvement of commercial centers and Gathering Places for Nānākuli, Mā`ili/Lualualei, Wai`anae and Mākaha. The development program should include the coordination of various public planning and financial resources and partnering with local landowners and local businesses. The overall goal of the phased development program should be to establish: (1) physically distinct and economically viable Rural Community Commercial Centers that will serve local commercial needs, provide local jobs, encourage pedestrian and bicycle circulation, and foster a spirit of community identity and community pride, and (2) Community Gathering Places that will provide a setting for cultural, educational and social activities.

Actions toward the achievement of these objectives should include the appropriate use of zoning, special tax abatements, provision of infrastructure, beautification of main streets, construction of mini-parks and gathering places, technical assistance, training in small business management, clustering of public structures and services, and the provision of grants, loans, and loan guarantees.

### **3.10.3 Planning Guidelines for Country Towns, Rural Community Commercial Centers and Gathering Places**

#### **3.10.3.1 Geographic Size of the Centers**

As a general guide, the geographic extent of the commercial and residential land uses that make up the Centers should be relatively small in scale.

Thus, the area to be developed as "Wai`anae Country Town" could extend from Wai`anae Mall to Old Government Road, and from Pōka`i Bay Beach Park to the vicinity of Wai`anae Elementary School. This area is about 4/5 mile long by about 1/4 mile wide, or about 100 acres in area. Walking time at a reasonable pace from the farthest edges of Wai`anae Country Town to the commercial establishments in the middle of the Center would be about 5 minutes.

The focal concept for Wai`anae Town Center is the improvement and expansion of Pōka`i Bay Beach Park, including the development of a Community Gathering Place there, and the revitalization of traditional "town center" commercial properties located on both sides of Farrington Highway. Ideally, improvements to the Park would include bringing park greenery and open space up to the Farrington Highway corridor, such that the Park and Pōka`i Bay are visible from the highway. More detailed plans for Wai`anae Country Town should be developed in the near future.

The Rural Community Commercial Centers would range in size from about three to five acres. Nearby homes would be within a reasonable walking distance of Center commercial establishments.

### **3.10.3.2 Commercial Establishments in the Centers**

Commercial buildings located within the Country Town and Rural Community Commercial Centers should be low-rise one-, two-, or at most three-story buildings. Where possible, existing older buildings that have some architectural interest should be preserved. New buildings should be designed and sited to create a strong building line along the main street. Parking lots should generally be located behind the buildings. The typical configuration for strip commercial development, with a large parking lot fronting the street and the commercial building located at the back of the parking lot, should not be allowed. A limited amount of "fast turnover" parking stalls could be located in front of new commercial buildings. The design of new buildings should incorporate elements and materials from traditional local architectural styles. Where possible, commercial buildings should be designed as multipurpose structures, with retail commercial space on the ground floor, and space for professional offices or residential apartments on the second floor.

### **3.10.3.3 Residential Structures in the Centers**

The proposed Wai`anae Country Town should be developed incrementally. There are at this time some vacant commercial and residential lots along Farrington Highway between Wai`anae Mall and the Wai`anae Community Center. Over time, there will be more opportunities to replace obsolete structures.

New residential development within Wai`anae Country Town should be built at a higher density than the typical local housing that has been developed along the Farrington Highway corridor, which usually has minimum lot sizes of 5,000 square feet. Although it is recognized that many residents would prefer to have larger lots—10,000 or 20,000 or more square feet—clustered housing is important for the overall design and commercial success of these Centers. Thus, the suggested housing types are 2-story townhomes, duplex units, and clustered single-family homes that may have average lot sizes of about 4,000 square feet. High-rise and mid-rise apartment and condominium buildings are not appropriate for the Wai`anae Coast. These kinds of structures are urban in character and are not compatible with the townscape of the Wai`anae District.

If the redeveloped Wai`anae Country Town eventually has about 40 gross acres of clustered residential use, and the average density is about 10 units per acre, the Country Town would have about 400 homes. This would mean that about 1,600 people would be within a few minutes walk of essential shopping and services.

**3.10.3.4 Center Amenities**

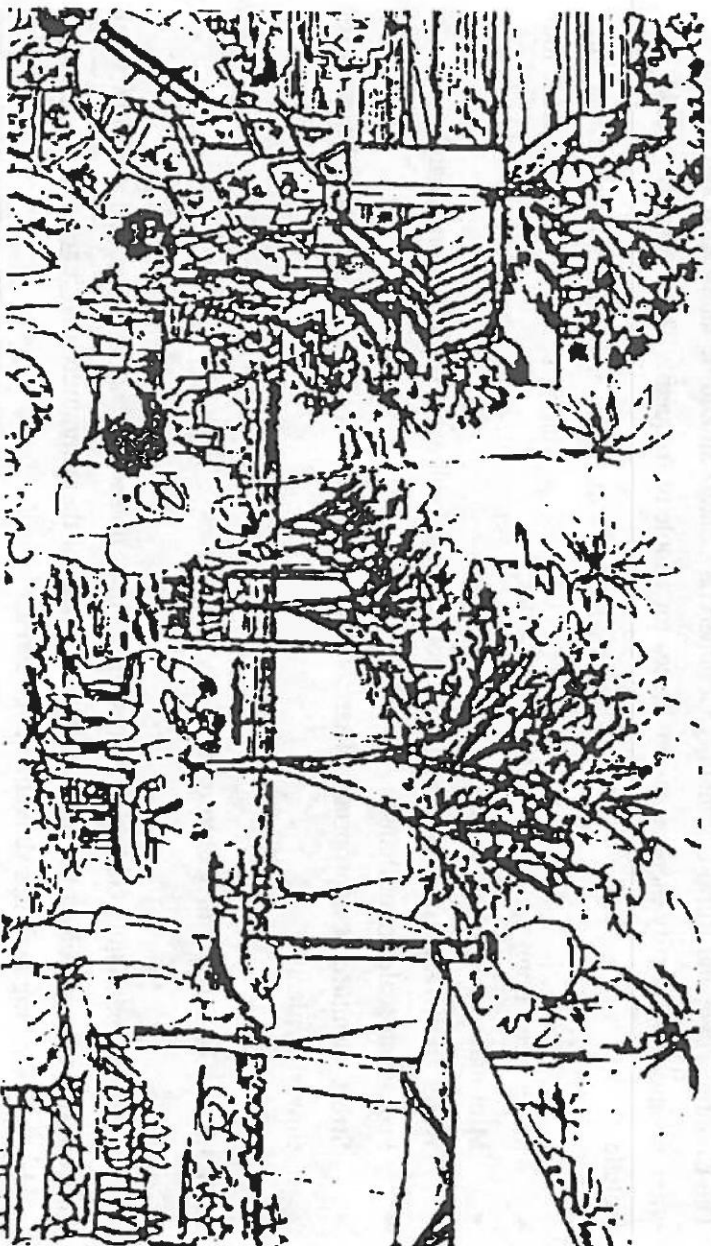
The Country Town and Rural Community Commercial Centers should be landscaped and contain other amenities to identify them as special places for people to frequent. These amenities could include:

- Street trees along the main streets of the Center;
- Mini-parks and gathering places;
- Wider front yards to accommodate outdoor cafes and sidewalk displays of merchandise;
- Pedestrian-scale street lights;
- Street furniture at appropriate places: benches, trash receptacles, bike racks, planters with flowering plants.

**3.10.3.5 Guidelines for Community Gathering Places**

It is likely that Community Gathering Places will be quite diverse in size, facilities, and amenities: each Gathering Place will reflect the needs and preferences of the community that it serves. As a general guide, the following facilities should be considered:

- One or more acres of park-like green space, with grass and shade trees. This open space would be used for informal gatherings, games, parties, and performances;
- A hula mound;
- A picnic area;
- Rest rooms;
- A multipurpose building that could be used for community meetings, indoor classes, and storage of materials and equipment;
- Adequate parking: usually a combination of on-street and off-street parking spaces;
- Signage, lighting and landscaping.



Land acquisition and capital funding for the development of the Community Gathering Places will be a challenge. A combination of City, private sector and community resources will probably be needed. Coordination with the Department of Hawaiian Home Lands on sites for Gathering Places would also be beneficial. The management and maintenance of a Gathering Place should be the responsibility of the local community. A system of volunteer labor for routine maintenance chores will be needed. Some funds will also be needed for maintenance materials and supplies.

#### **3.10.4      Relation to Land Use and Open Space Maps**

Wai`anae Country Town and Rural Community Commercial Centers for Nānākuli, Mā`ili, and Makaha are schematically shown on the Land Use Map. Community Gathering Places for Nānākuli, Mā`ili, Wai`anae, and Makaha are schematically located on the Open Space Map.

### **3.11 PARKS AND RECREATIONAL AREAS**

**3.11.1 Overview of Existing Parks and Recreational Areas**

The Wai`anae District has a diverse number of parks as shown in Table 3-7, and contains the world-renowned Mākaha Beach for surfing competitions. The district has one (1) regional park, eight (8) beach parks, four (4) beach/shoreline access points, one (1) district park, four (4) community parks, one (1) neighborhood park, and one (1) cultural park. The location of these parks is shown in Figure 3-2.

**TABLE 3-7**  
**City Parks and Park Facilities**

<b>Park Name</b>	<b>Types of Park Facilities</b>	<b>Acreage</b>
<b>Regional Park</b>		
Wai`anae Regional Park	Undeveloped	19.50
<b>Beach Parks</b>		
Kea`au Beach Park	2 comfort stations, 55 camp sites, 55 parking stalls, picnic facilities, 3 handicapped stalls	38.05
Lualualei Beach Park	2 comfort stations, 15 campsites with parking, 37 parking stalls, 1 handicapped stall, picnic facilities	17.75
Mā`ili Beach Park	4 comfort stations, 1 picnic area, 2 lifeguard towers, children's play apparatus, 207 parking stalls, camping sites	39.56
Mākaha Beach Park	1 comfort station, 1 lifeguard tower, a pay phone	20.62
Mauna Lahilahi Beach Park	1 comfort station, picnic facilities	8.74
Nānākuhi Beach Park	1 medium recreation building (arts and crafts room, meeting game room, kitchen, office, comfort station), 2 comfort stations, 1 bathhouse, 2 basketball courts (lighted), 1 volleyball court (lighted), softball/football field (softball field lighted), 1 football practice field, 19 campsites, 4 trailer campsites, 1 lifeguard tower, picnic facilities, children's play apparatus, 38 parking stalls, 2 handicapped stalls	39.63
Pōka`i Bay Beach Park	1 bathhouse, 2 lifeguard towers, 2 pay phones, canoe storage area, children's play apparatus, 70 parking stalls, 5 handicapped stalls	15.49
Uleahwa Beach Park (1 and 2)	1 comfort station, 51 parking stalls, 1 handicapped stall	57.65

Park Name	Types of Park Facilities	Acreage
<b>District Park</b>		
Wai`anae District Park (contained within the overall boundaries of the as-yet undeveloped Regional Park of an additional 19.5 acres for a total of 42.42 acres)	1 recreation building/gymnasium (kiln/drying room, woodwork room, meeting/multipurpose room with kitchen, 2 offices, covered lanai, martial arts room, boxing/wrestling/weight lifting room, game room, ceramics room. Gym: 1 basketball center court, 2 volleyball crosscourts, crosscourts, 1 volleyball center court, 2 volleyball crosscourts, bleacher capacity is 680), 1 community and senior center building (auditorium, food preparation area, 2 offices, 2 conference rooms, platform stage, 2 storage/dressing rooms, 2 alcoves, rest rooms, 4 storage rooms), 1 comfort station, 2 basketball courts, 8 tennis courts (6 lighted), 1 softball field, 1 football/soccer field, 1 exercise cluster, 1 pay phone, 1 horseshoe facility, children's play apparatus, 93 parking stalls, 4 handicapped stalls, landscaped	22.92
<b>Community Parks:</b>		
Mā`ihi Community Park	1 small recreation building (office, multipurpose room, classroom, comfort station), 2 basketball courts (lighted), 2 volleyball courts (lighted), a softball/football field (softball field lighted), 34 parking stalls, children's play apparatus	3.68
Mākaha Community Park	1 medium recreation building (multipurpose room, office, kitchen, 3 storage rooms, 2 alcoves, rest rooms), 1 comfort station/pavilion, 2 basketball courts (lighted), 2 volleyball courts (lighted), 1 softball field (with dugouts), 1 outdoor grass stage area, children's play apparatus, 12 parking stalls, 1 handicapped stall	4.32
Pūliha`au Community Park	1 small recreation building (arts and crafts room, kiln/drying room, meeting/multipurpose room, office, toilets), 2 basketball courts (lighted), 2 volleyball courts (lighted), 1 baseball field, 1 softball field (lighted, with bleachers), 1 football field (lighted), 1 skateboard rink, children's play apparatus, 20 parking stalls, 1 handicapped stall	10.44
Mā`ihi Kai Community Park	4-acre first phase under construction, completion scheduled for late summer 1998. Park to be fully developed in three more phases	11
<b>Neighborhood Park:</b>		
Kaunpui Neighborhood Park	1 comfort station/pavilion, 1 football field, 1 multipurpose playfield, children's play apparatus	7.51
<b>Others:</b>		
Mauna Lanihale Botanical Garden	Undeveloped; to be developed as a cultural garden	14.3
<b>TOTAL ACREAGE</b>		<b>331.23</b>

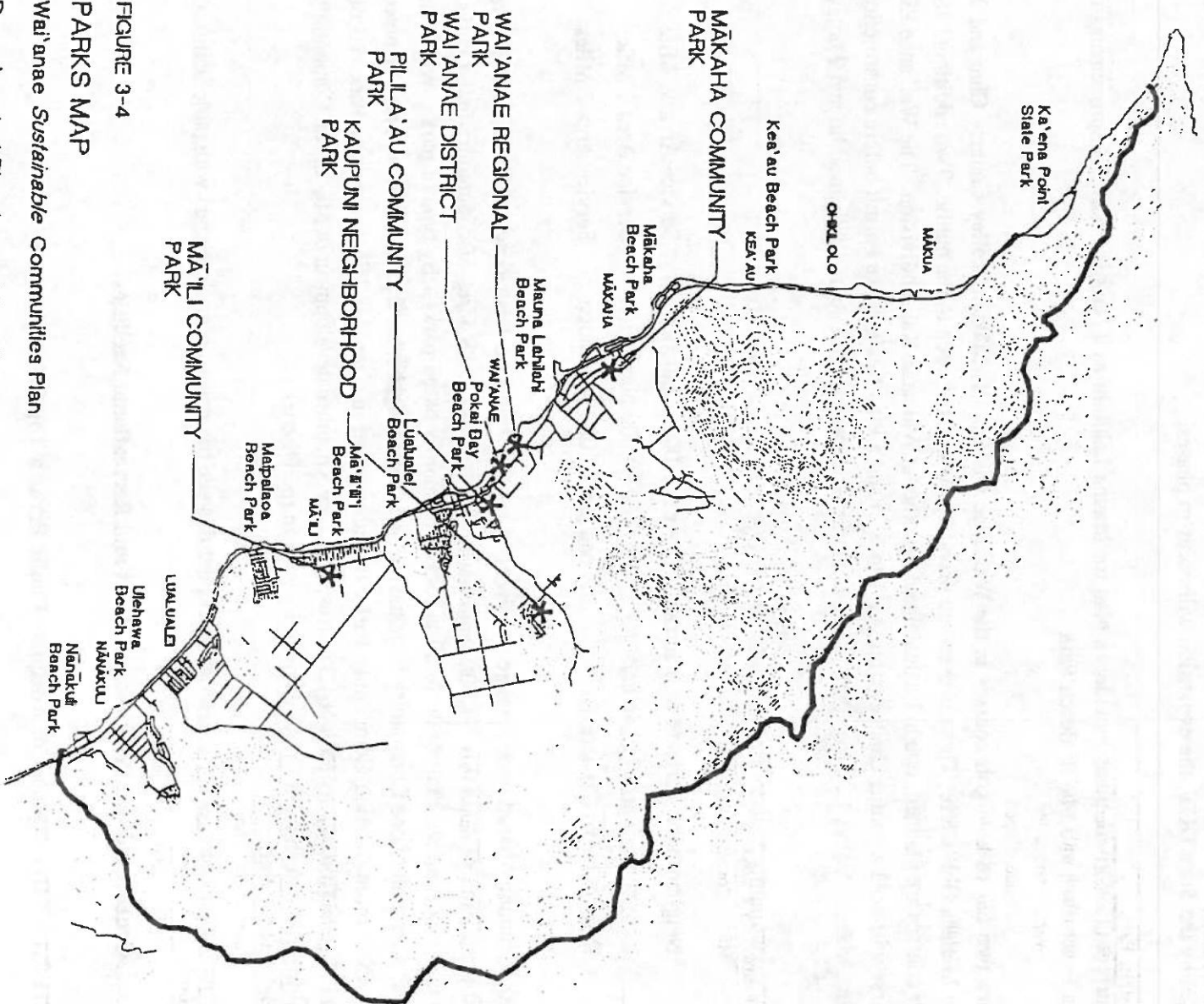


FIGURE 3-4

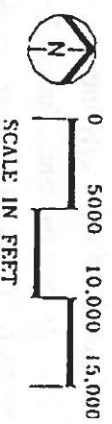
## PARKS MAP

Wai'anāe Sustainable Communities Plan

Department of Planning and Permitting  
City and County of Honolulu

April 1999

Source: Department of Planning and Permitting  
and Department of Parks and Recreation



The City and County of Honolulu Parks Department has plans to expand the Mākaha Beach Park by adding lands mauka of Farrington Highway. The plan is to reroute a portion of Farrington Highway mauka to allow for this expansion. However, because rerouting of Farrington Highway will be a major undertaking, controlled by the State DOT, the expansion will occur in phases.

Other current (1998) park plans include: a plan for Mauna Lāhilihi as a "cultural park," improvements to Ulehawa Beach Park and Mā`ili Beach Park.

There are two (2) 18-hole golf courses in the Wai`anae District: 1) Mākaha Valley Country Club and 2) Sheraton Mākaha Golf Club. These courses are privately owned, but open to the public. Two additional 18-hole golf courses are planned, one in Lualualei and the other at Wai`anae Kai subdivision. The Wai`anae Kai golf course will need a zoning change (from Ag-1 to P-2) and a Plan Review Use Permit before construction can begin. Mākaha Valley Country Club is also planning to expand its golf course with an additional 9 holes.

The City's community-based park standards for the various types of parks are:

- |                                      |                           |                      |
|--------------------------------------|---------------------------|----------------------|
| • Neighborhood Parks (4 to 6 acres): | one per 5,000 population  | Service Area ½ Mile  |
| • Community Parks (10 acres):        | one per 10,000 population | Service Area 1 Mile  |
| • District Parks (20 acres):         | one per 25,000 population | Service Area 2 Miles |

The 1990 community-based park acreage requirement for the Wai`anae District was 75 acres. The 1998 estimated population of 40,000 to 44,000 people would require 80 to 88 acres of community-based parks. There is thus a current shortfall of 31 to 39 acres of community-based parks. By type of parks, Wai`anae District has a shortfall of one Community Park and seven or eight neighborhood parks. It should also be noted that two of the three existing Community Parks are substandard in size: Mā`ili Community Park at 3.68 acres, and Mākaha Community Park at 4.32 acres. The City's planned development of Mā`ili Kai Community Park will fulfill the need for a fourth community park in the District.

The District also has acreage for a Regional Park, but this site has not yet been developed with park facilities.

### **3.11.2      General Policies Pertaining to Parks and Recreational Facilities**

#### **3.11.2.1      Development of Adequate Public Parks a Top Priority**

Parks and recreational facilities are of great importance to the health and welfare of the Wai`anae community, and especially important to the health and well-being of Wai`anae's children and young people. At least the minimum number and size of community-based parks should be developed by the Year 2020. The development of the Wai`anae Regional Park should also be a high priority. Thereafter,

the City should assess the need for additional parks and recreational facilities, and, where there is an identified need above the minimum standards, these additional facilities should be provided.

#### **3.11.2.2 No More Golf Courses**

There is no land available within the Rural Community areas of the Wai`anae Land Use Map that would be large enough for a golf course. Golf courses are considered to be incompatible with Agricultural lands or Preservation lands of the Wai`anae District. Therefore, public agencies should enforce a policy of no new golf courses within the Wai`anae District.

### **3.11.3 Planning Guidelines for Parks and Recreational Facilities**

#### **3.11.3.1 More Neighborhood Parks Needed**

In the Wai`anae District, there is a shortfall of 7 to 8 Neighborhood Parks based on the City's park standards. This shortfall should be addressed through an incremental park development program. Generally, there should be two neighborhood parks for each of the main settlement areas of the District: Nānākuli, Mā`ili/Lualualei, Wai`anae, and Mākaha. There are some but not many undeveloped lands within these Rural Community areas. The needed acreage for park development should be secured before infill residential development of vacant/residentially zoned lands precludes the location of neighborhood parks in close proximity to these developed areas.

#### **3.11.3.2 Flexible Criteria for Recreational Facilities**

In developing neighborhood parks, there is a need for more flexibility with the criteria for "allowed" recreational facilities. For example, current City standards specify the development of a comfort station for a neighborhood park, but a "recreation building" is not included. However, depending on the service population, the location of the neighborhood park, and the distance to a community park that provides a recreation building, a recreation building or multi-purpose building should be provided for a neighborhood park if there is a clear need for one. Since building maintenance and supervision services are always an issue—in terms of both personnel and overall cost—a cooperative program could be established whereby a community organization will share in supervision responsibilities and maintenance costs of a recreation building.

### **3.11.4 Relation to Open Space Map**

Existing beach parks and active recreation parks are schematically shown on the Open Space Map.

### 3.12 MILITARY LAND USE

#### 3.12.1      Overview of Military Land Use in the Wai`anae District

The U.S. Navy owns 7,498 acres of Luahalei Valley—"Naval Magazine Luahalei Headquarters Branch"—which the Navy uses for the storage of various kinds of ordinance that is needed for all branches of the U.S. military in Hawai`i. The Navy also owns another 1,729 acres of Luahalei—"NCTAMS EASTPAC, RTF Luahalei"—which is used for state of the art high and low frequency radio signal transmissions that are used for the navigation of Navy vessels throughout the Pacific.

The U.S. Army uses 4,130 acres of Mākua Valley for training programs. The Army's Mākua lands consist of 170 acres of fee land, 782 acres of land leased from the State of Hawai`i, and 3,237 acres of ceded lands also leased from the State. These leases expire in the Year 2029. The Army's use of Mākua for live fire training exercises dates back to World War II. Prior to that time, Mākua lands had been used for various types of agriculture and rural settlement, including a large cattle ranch during the 19<sup>th</sup> century.

There has been considerable discussion in recent years about the return of some of these military lands to public use. About 1,000 acres of the Navy's radio communications installation at Luahalei were identified by the federal government as lands that could possibly be conveyed to the Department of Hawaiian Home Lands in lieu of monies owed to DHHL by various federal departments. However, the DHHL claims were satisfied with other lands, including some of the lands at Barbers Point Naval Air Station in the Ewa District of O`ahu. The Navy also has a long-range plan for the relocation of its stored ordinance from Luahalei to the Naval Magazine at West Loch. The estimated cost of the new facilities that will be needed at West Loch is \$500 million. This program is therefore "very long-range" in nature.

The issues relating to Mākua Valley are quite complex. For many members of the Wai`anae Hawaiian community, Mākua Valley has a special cultural and religious significance. There are a number of important heiau and other significant cultural sites found there. Some of the more vocal people have asked that Mākua Valley be returned to the public "now." Environmental agencies and organizations are concerned about the impact of the Army's live fire training exercises on rare and endangered plants, birds, and tree snails that inhabit the forested upper portions of the valley. The Army, on its side, considers the Mākua training area to be a "mission essential" training facility: there is no other training site on the island of O`ahu where the Army can conduct live fire exercises that include helicopter gunships and larger caliber weapons.

The Army has recently developed an "Ecosystems Management Plan" for the protection and conservation of the natural resources of its training lands, including Mākua Valley. The Army has also recently begun to work with a community group in Wai`anae to provide for community access to and care of Ukanipo Heiau, one of the more important heiau in the Wai`anae District. These proactive efforts on the part of the Army are positive examples of military/community cooperation.

### 3.12.2 General Policies Pertaining to Military Lands

#### 3.12.2.1 Long-Range Use Policy: Preservation

In keeping with the WAI`ANAE CONCEPT, the City's overall long-range land use policy for the military lands at Lualualei and at Mākua Valley is that these lands should be preserved as agricultural/open space and mountain preservation areas. This long-range policy is reflected on the *Sustainable Communities Plan Land Use Map*.

#### 3.12.2.2 Recognition of Military Use

The importance of U.S. military uses of lands at Lualualei and in Mākua Valley is recognized both in terms of the overall mission of the military and the importance of the military to the economy of the State of Hawaii and the City and County of Honolulu. The current Wai`anae *Sustainable Communities Plan*, which looks ahead to the Year 2020, therefore recognizes the continued use of these lands for military purposes for the foreseeable future. This recognition is illustrated on the *Sustainable Communities Plan Land Use Map* by an overlay texture that shows the extent of military lands in the Wai`anae District.

#### 3.12.2.3 Cooperative Programs

The City is committed to working with the community and with the Army and Navy to organize and implement programs for the ongoing protection and preservation of important cultural and natural resources found on the military lands of the Wai`anae District.

#### 3.12.3 Relation to Land Use Map

The two Navy installations at Lualualei and the Army's Mākua Training Area are shown on the Land Use Map by a "dot screen" pattern that allows the overall land use designation colors for "Agriculture" and "Preservation" to be seen.

## 4. PUBLIC FACILITIES AND INFRASTRUCTURE POLICIES AND GUIDELINES

### 4.1 TRANSPORTATION SYSTEMS

#### 4.1.1 Overview of Transportation Systems in the Wai`anae District

The major roadway in Wai`anae is Farrington Highway. In the "old days," Farrington Highway was a narrow, dusty track. Paved roads ended in Waipahu, and the ride out to the Wai`anae Coast was a long haul. Then as now, Farrington Highway was the only road linking the Wai`anae District to Ewa and to Honolulu beyond. During the heyday of rail transportation on O`ahu, a single track ran along the Wai`anae Coast to Ka`ena Point, and around to Mokuleia and Waialua on the North Shore. The embankment for this old railroad right-of-way still exists along a portion of the coast.

Today in 1998, Farrington Highway in the Wai`anae District has four travel lanes to Mākaha Valley Road, and two lanes to its terminus at Keawa`ula. It serves as both the local coastal road for trips within the District as well as the only commuter highway for trips outside of Wai`anae. During peak traffic, Farrington Highway is heavily congested, especially between Wai`anae Town Center and Nānākuli. Important local collector roadways include Nānākuli Avenue, Heleakala Avenue, Lualualei Naval Road, Hakimo Road, Pa`akea Road, Wai`anae Valley Road, and Mākaha Valley Road (Figure 4-1).



The 2020 O`ahu Regional Transportation Plan (ORTP) recommends safety and operational improvements for Farrington Highway in the 1995 to 2000 time frame, including sidewalks, pedestrian crosswalks or bridges, additional traffic signals, and continuous left-turn lanes. Some of these improvements have been constructed during recent highway widening. Additional improvements are under study or design during the 1998-1999 time frame, including synchronization of traffic signals.

The ORTP cites for 1995-2000, "Wai`anae Coast Mauka Emergency Access Route" to accommodate Farrington Highway traffic whenever it is rendered impassable due to major traffic accidents, storms or any other incidents. Such facility may incorporate private/military lands and roads to complete apparent gaps along the alignment.

In the 2006-2020 time period, the ORTP recommends that Farrington Highway be widened to 6 lanes from Kapolei to Nānākuli. This would improve the highway level of service (LOS) to a projected LOS "C."

In recent years, with the increase in the Wai`anae District's population, and the general trend of more automobile use by most citizens, traffic congestion on Farrington Highway has grown progressively worse. Congestion during the peak traffic period for morning commuters—about 5:00 to 7:00 a.m.—has been aggravated by the addition of unsynchronized traffic signals. By the end of 1998, there were 27 signalized intersections between Māhaha Valley Road and Nānākuli Valley Road, a distance of about 8 miles. Residents report that this 8-mile drive takes about 45 minutes during the morning peak period. Thereafter, commuters headed for jobs in the downtown Honolulu or Waikiki area are still faced with another 1 to 1-1/2 hour drive.

As a possible solution to this increasingly severe commuter problem, some area residents have advocated the construction of a "Mauka Road" or "Mauka Highway." The concept is for the construction of a limited access roadway from the Wai`anae coast through the Wai`anae Mountain Range to connect to Kunia Road in the Ewa District. The State DOT is supposed to undertake an in-house feasibility study to determine the possible alignment, demand and cost implications for a mauka roadway. This feasibility study may be completed by the end of 1999.

The Mauka Road concept is separate and distinct from the Emergency Road project, and the two concepts should not be confused.

The Mauka Road concept raises some difficult and fundamental issues concerning regional transportation systems and regional growth management. Traffic congestion on Farrington Highway is very severe, and will probably grow worse. However, the construction of a major new commuter roadway that would ease traffic congestion and shorten commuting time to areas outside of the District will facilitate urban growth and development. The fundamental policies of preservation of agricultural lands and support of a rural lifestyle for the Wai`anae community will be more difficult to sustain if major new infrastructure projects like a new highway are implemented.

Traffic congestion could be alleviated through an enhanced public transportation system for the Wai`anae District, including:

- An increase in express bus service out of and back to the Wai`anae Coast;
- The establishment of a public or privately owned local mini-bus shuttle service that would provide for low-cost public transportation between Nānākuli and Keawa`ula;
- Development of a bikeway on the old railroad right-of-way. Part of the right-of-way is under

DOT jurisdiction, and part is incorporated within City park areas. The old railroad right-of-way has also been proposed for use by "antique trains" that would bring tourists into Wai`anae to shop. This concept may have some appeal to local business people, but such a use would not alleviate the traffic problem.

Other programs might somewhat decrease the dependence on the automobile for local trips. There is a need for a safe bicycle route along the entire Wai`anae Coast, and up some of the major valley roads, at least as far as the concentrations of urban/suburban development. Farrington Highway and the major valley roads also need safe sidewalks for pedestrians to use. Concepts for future redevelopment that focus on clustering of homes near Town Centers and Village Centers, as discussed earlier in this Plan, would also lessen auto use. The provision of more local jobs and thus less dependence on out-of-District commuting would also be beneficial.

Ideally, Farrington Highway would be "downsized" to serve as the local coastal road, and a new "reliever road" would be constructed. Land use controls would prevent the new road from serving as an "urban growth generator." Important issues including funding and social/ environmental impacts should be evaluated. The intent would be to refocus the pattern of development of the community back to the natural beauty and recreational opportunities along its coastline by mitigating the access problems posed by Farrington Highway.

#### **4.1.2 General Policies Pertaining to Transportation Systems**

##### **4.1.2.1      Farrington Highway Safety Improvements for Pedestrians and Motorists**

A thorough study of safety improvements should be undertaken for Farrington Highway in Wai`anae, and needed safety measures should be implemented in a timely manner. Safety improvements to be considered should include sidewalks, dedicated bike lanes, improved lighting, relocating utility poles and fire hydrants that are too close to the edge of the travelway, left turn lanes, traffic signals, traffic islands, median strip, pedestrian overpasses and signalized pedestrian crosswalks. Use of a contra-flow system during the A.M. peak period and synchronization of traffic signals would also improve traffic flow and traffic safety. To the extent possible, these safety measures should not impede the movement of vehicles on Farrington Highway, but where there is a conflict between pedestrian safety and vehicular flow, pedestrian safety should be the primary concern.

##### **4.1.2.2      Farrington Highway Beautification**

A comprehensive program for the incremental beautification of Farrington Highway in Wai`anae should be established by the State DOT with community involvement. The program should consider

undergrounding of overhead wires and elimination of utility poles, the planting of shade trees and other landscaping, with an emphasis on native, drought-tolerant plants; attractive signage announcing the entrance to the Wai`anae District and the entrance into the subcommunities of Nānākuli, Mā`ili, Lualualei, Wai`anae, and Makaha; and special design elements within the Country Town and Village Centers, including planing, lighting, signage, paving, and street furniture. Curb to curb pavement width could also be reduced. The overall objective should be to return at least parts of Farrington Highway to a more human and pedestrian-friendly scale.

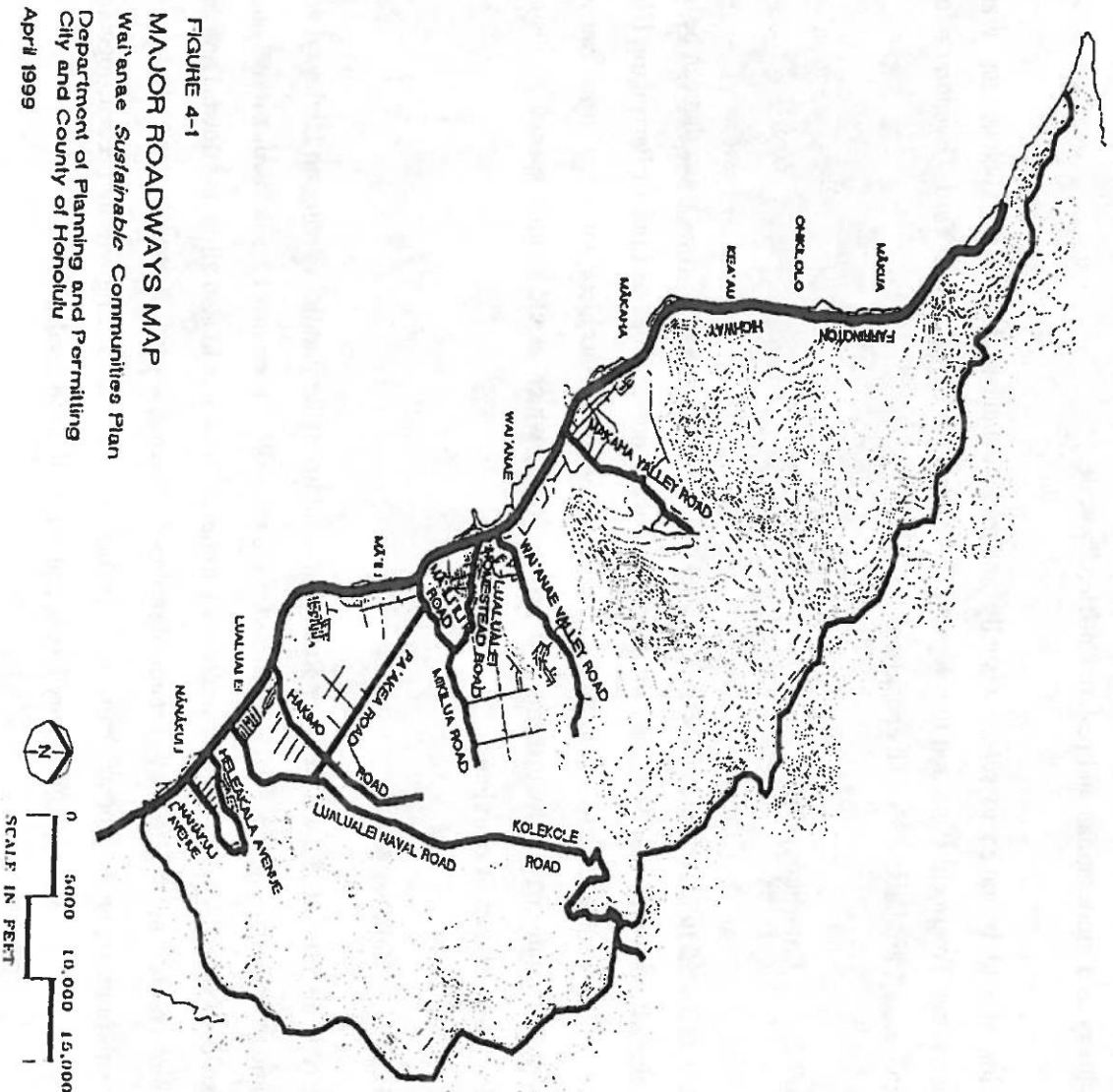
Action should be taken to screen visually unattractive industrial facilities such as the Wai`anae Wastewater Treatment Plant and the Department of Transportation's Base Yard. Eventual relocation of the Base Yard should also be considered.

#### **4.1.2.3 Emergency Road**

There is a need to establish an Emergency Road or Emergency Access/Egress route that can be used as an alternate to Farrington Highway for those times when one or more sections of Farrington Highway may be impassable due to storm damage, a severe vehicular accident, or some other cause. An emergency route may include sections of private roads, which would require special provisions for public use in times of emergency.

#### **4.1.2.4 Reliever Road**

There is also the need for a Reliever Road that would roughly parallel Farrington Highway, and that would provide an efficient commuter route for the many Wai`anae coast residents that travel out of the District to work every day. Construction of a Reliever Road would also allow for downsizing of some sections of Farrington Highway. Technical studies on alternative road alignments, land takings, regional growth impacts, environmental impacts, construction costs and funding will be needed, together with a thorough assessment of community issues and transportation needs.



#### 4.1.2.5 Public Transportation

The anticipated expansion of the current islandwide City bus fleet—from 525 to 650 buses—will improve overall transit service within the Wai`anae District and other areas of O`ahu. As a supplement to the bus system, there is a need to provide a local shuttle service that could utilize smaller buses or vans. This shuttle service, publicly or privately operated, could accommodate ridership within the District. The regular bus system would then provide for public transportation between the Wai`anae District and other areas of O`ahu.

##### 4.1.2.6 Other Modes of Transportation

Encourage plans and programs for other modes of transportation, including bikeways, pedestrian walkways and paths, and creative use of existing unutilized transportation corridors such as the old OR&L railroad right-of-way. This ROW could be used for a multiuse path for bikers, roller bladers, skateboarders and pedestrians that would be safe from vehicular traffic.

## 4.2 POTABLE WATER SYSTEMS

### 4.2.1 Overview of Potable Water Systems

The potable water system currently servicing the area consists of six source wells in Mākaha, the Mākaha shaft (2), Kamaile Wells, three wells in Wai`anae Valley, the Wai`anae Tunnel and the Plantation Tunnel. The Board of Water Supply (BWS) recently completed installation of new water supply wells in Mākaha and Wai`anae Valleys. Addition of these new wells increases the capacity of the system to 7.8 MGD. Potable water is also imported from the Pearl Harbor aquifer to supplement the District's needs. In 1996, the actual draw from the Wai`anae District potable water sources was 4.337 MGD. In 1991, the CWRM adopted the State Water Resources Protection Plan findings, which set the *sustainable* yield of the Mākaha aquifer at 4 mgd and the Wai`anae aquifer at 3 mgd.

The 5-year average production (1992-1996) from the sources in Mākaha and Wai`anae totaled 4.5 mgd. The remaining Wai`anae demand was supplied by Pearl Harbor water sources which, over the 5-year period, averaged 3.9 mgd, for a total Wai`anae average daily demand of 8.4 mgd.

Two new water storage reservoirs are also planned in Mākaha and Nānākuli. These new reservoirs will have storage capacity of 2 MG each. Construction of the Mākaha reservoir is expected to commence in 1998 and construction of the Nānākuli reservoir is expected to begin in 2001.

Because of the decrease in water demand from agriculture in Ewa and Central O`ahu, BWS does not feel that there is a problem if water continues to be imported from the Pearl Harbor aquifer. However, proposed golf courses in Wai`anae must find their own nonpotable water sources. BWS projections for the year 2020 indicate that the Wai`anae District will consume 12.28 MGD of potable water. These projections are based on a resident population of 48,155 people, a visitor population of 3,127 people, and a per capita demand of 240 gpd. If the flow from local wells remains at 1996 levels—about 4.34 million gpd—the Wai`anae District will have to import close to 8 million gpd to provide for this projected 2020 population.

Potable water is conveyed to users through a system of water mains that follow the major roads in the District: Farrington Highway, Nānākuli Avenue, Heleakala Avenue, Hakimo Road, Kaukama Road, Paakea Road, Ma`ili`ili`i Road, Luahalei Homestead Road, Wai`anae Valley Road, and most of the major roads in Mākaha Valley. The water distribution system along Farrington Highway ends at the last 1-acre lot just past Kepuhi Point.

The cost of installing water service, especially for irrigation of crops on a small family farm, is an issue in Wai`anae. Currently, the BWS installation charge for a 1-1/2 inch service line and 1-inch meter for agricultural use is \$2,000. The water systems facilities charge for a 1-inch meter is an additional \$11,000. Larger meters and/or long service lines cost even more money. These charges are large capital outlays for the small family farms of the Wai`anae coast.

It should be noted that the agricultural water rate is being subsidized by BWS. For agricultural purposes, water use above what an average single-family home uses in a month is charged at ½ the residential rate. Impact fees for new agricultural water users are, however, substantial. The impact fee distributes the cost of constructing new water sources, pipelines, and reservoirs over the entire Island of O`ahu. New environmental laws continue to drive up construction costs, and these costs are distributed among new water users.

#### **4.2.2 General Policies Pertaining to Potable Water Systems**

##### **4.2.2.1 Determination of Safe Yield of Aquifers as Related to Stream Flow**

In keeping with the earlier policies pertaining to the preservation of streams and stream corridors in the

Wai`anae District, permanent instream flow standards for the perennial segments of streams in the District. As part of this action, the benefits of instream and non-instream uses of water resources, including the economic impact of restrictions on such uses, should be weighed. The setting of instream flow standards may restrict both future groundwater wells and agricultural stream diversions.

#### **4.2.2.2 Wise Use of Potable Water Resources**

Public education and coordination are needed to reduce the District's reliance on imported Pearl Harbor aquifer water by developing conservation programs to efficiently utilize the existing in-District potable water resource. Brackish and reclaimed water systems should be developed for irrigation of large landscaped areas, including existing golf courses, parks, and certain agricultural uses. The highest quality potable water should be reserved for domestic consumption.

#### **4.2.2.3 Affordable Water Service for Small Farmers**

In order to encourage and support agricultural uses in the Wai`anae District, a program should be established that will enable small farmers, including family commercial farmers and part-time farmers, to obtain water meters and water service lines at an affordable cost. This program may include grants and loans from other agencies such as the Federal Rural Development Agency, as well as modifications to the City's impact fee structure for new water services.

### **4.3 WASTEWATER COLLECTION AND TREATMENT SYSTEMS**

#### **4.3.1 Overview of Wastewater Collection and Treatment Systems**

Wastewater for the Wai`anae district is collected at the Wai`anae Wastewater Treatment Plant (WWTP) located north of Pu`u Mā`ili`ili and south of Wai`anae Mall. The treatment plant has been designed for average dry weather flows of 5.2 MGD with a peak flow of 13.8 MGD. 1997 average flows to the treatment plant were approximately 3.2 MGD. Thus, the plant has excess capacity to handle additional flows.



Based on 80 gallons per capita per day, the current design capacity of the wastewater treatment plant could handle an additional 21,250 people, or an additional 5,300 households (based on an average of 4 persons per household) tied into the system.

The location of the WWT—fronting on Farrington Highway and next to Wai`anae Mall, the largest shopping center in the Wai`anae District—is less than ideal. Little has been done to screen the facility with appropriate landscaping.

The major sewer lines generally follow Farrington Highway and the major valley roads, with the exception of Lualualei Valley, where the sewer lines do not extend beyond the more densely developed coastal zone.

Although the treatment plant has excess capacity to handle new flows, many of the existing residences that were initially developed with cesspools have not yet connected to the wastewater system. Approximately 1,180 residences that are near existing sewer lines are not yet connected (see Table 4-1).

TABLE 4-1

## Sewer Connections

Area	Connected	Not Connected
Mākaaha	809	212
Wai`anae	1205	335
Mā`ili	1422	106
Nānākuli	1302	531
<b>TOTAL</b>	<b>4738</b>	<b>1184</b>

Based on the above City records on sewer connections, approximately 20 percent of the residences in the Wai`anae district are not hooked up to the wastewater collection system. Many of these residences are on property that was developed by the Department of Hawaiian Home Lands. The responsibility for tying into the wastewater collection system lies with the residents. The sewer lines have been sized to handle these house lots. However, since many people have not connected to the system, low flows in the lines cause septic conditions in the sewer lines, which often result in odors.

The Wai'anae Wastewater Treatment Facility was recently upgraded to secondary level treatment. The ocean outfall was also extended to a greater depth. According to the "Addendum to the Facility Plan for the Wai'anae Wastewater Treatment Plant," June 1980, the 5.2 MGD WWTP could service a total population of 65,000 people.

Although the wastewater treatment plant has adequate capacity to handle additional flows, sewer lines in the district may need to be upgraded, depending on where and when new development occurs. The first sewer lines were installed during the 1950s, and some of these lines may be nearing the end of their useful lives.

#### **4.3.2 General Policies Pertaining to Wastewater Collection and Treatment**

##### **4.3.2.1 Phased Program for Replacement of Old Sewer Lines**

The program for the phased replacement of old sewer lines in Farrington Highway and in the main valley roadways should be continued.

##### **4.3.2.2 Improvements to the Wai'anae WWTP**

Landscaping improvements to the Wai'anae WWTP that will minimize this facility's impact on the community should be implemented. Monitoring of the operations that contribute to odor problems should be continued and operational improvements should be implemented if needed to minimize odor impacts.

#### **4.3.3 Planning Guidelines for Wastewater Collection and Disposal Systems**

##### **4.3.3.1 Water Reuse Program**

The feasibility of expanding the City's reclaimed water program to the Wai'anae District should be investigated. Reclaimed water could be used for irrigating roadway landscaping, existing golf courses, and certain types of crops. A well-managed water reuse program can aid in meeting nonpotable water needs, thus reserving the District's very limited potable water for higher quality uses and reducing the amount of water that needs to be imported into the Wai'anae District.

#### **4.3.3.2 Coordinated Program with DHHL**

The City and DHHL should work together to establish a program that will assist Hawaiian Homesteads homeowners to connect to the City's wastewater collection system. The cooperating entities should seek federal, state, and local assistance in establishing a program of small grants and low interest loans that can be made available to lower income families to finance these hookups.

### **4.4 ELECTRICAL POWER AND COMMUNICATIONS**

#### **4.4.1 Overview of Electrical Power and Communications Systems**

The Wai'anae District is at present adequately served in terms of electrical power and both telephone and cable television systems. Hawaiian Electric Company is planning a new electrical substation in the vicinity of Wai'anae Valley Road/Plantation Road to provide a more reliable system. As relatively little growth is planned for this District to the Year 2020, these systems are not a significant issue for the Wai'anae *Sustainable Communities Plan*.

#### **4.4.2 General Policies Pertaining to Electrical Power and Communications**

##### **4.4.2.1 Reducing the Visual Impact of Lines and Poles**

As discussed in the section on Transportation and the policies relating to "Beautification of Farrington Highway," there is a need for a phased program of undergrounding utility lines that now severely impact the scenic quality of the District's main coastal roadway. In addition, any new transmission line corridors for electricity or communications should be located with care so that scenic qualities are not adversely impacted.

### **4.5 DRAINAGE SYSTEMS**

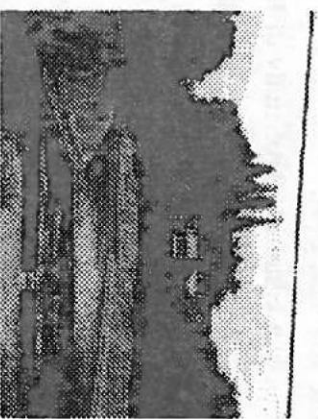
#### **4.5.1 Overview of Drainage Systems**

There are no perennial streams in the coastal areas of the Wai'anae District, and the average annual rainfall in the coastal plain is less than 20 inches. However, because of flood damage that has occurred in the area from severe

storms, such as Kona storms, studies were performed in the late 1950s by the West O'ahu Soil Conservation District and the City and County of Honolulu. These studies were performed to determine what drainage facilities would be needed to handle the one percent event or the 100-year storm.

As a result of these studies, four large concrete-lined drainage channels were constructed to discharge storm water runoff into the ocean. These channels are: 1) Kaupuni Stream Channel in Wai'anae that discharges into the northwestern side of Pōka'i Bay; 2) Mā'ili'ilī'i Stream Channel that discharges into the ocean between Luahalei Beach Park and Mā'ili Beach Park at Pu'u Mā'ili'ilī'i; 3) Mā'ili Channel that discharges into the ocean north of Mā'ili Point; and 4) Ulehawa Stream Channel that discharges into the ocean south of Pu'u o Hulu Kai.

These "improvements" notwithstanding, Wai'anae still has localized flooding and drainage problems. These problems are caused by the lack of adequate drainage facilities in new subdivisions, residents building walls around their property to divert storm water, and people filling in natural drainage swales and ditches. In addition, certain sections of Farrington Highway were constructed at a higher elevation than areas mauka of the road and the highway thus acts like a dam.



The City is currently designing a project for a new drain line on Lahaina Street and conducting a study for potential drainage improvements on Hakimo Road. Also contained in the City's 6-year Capital Improvement Program are drainage improvements for Auyong Homestead Road and Wai'anae Elementary School. The City has recently submitted a proposal to the Department of Land and Natural Resources (DLNR) through the "Flood Mitigation Assistance Program" to prepare a "Drainage Master Plan" for Wai'anae. However, competition for these funds is high and the prioritizing system for projects is uncertain. It appears that a comprehensive study of local drainage problems in Wai'anae would provide a long-range plan of action for the City. Alternative ways of funding such a study should be considered.

The larger flooding problems relate to flooding from major storms, including heavy rainfall from Kona storms and high surf from coastal storms. Storms with heavy rains create severe local flooding and, on occasion, can cause major damage to homes from mauka stream flooding. Coastal storms with high winds and waves can

result in flooding and sand accumulation on shoreline properties, including sections of Farrington Highway that are adjacent to the beach. Farrington Highway is especially vulnerable to coastal flooding in the vicinity of Ulehawa Channel, Mā`ili Channel, Mā`iia`i Channel, East Mākaha Stream, Mākaha Stream, and sections of the highway in Kea`au and `Ohikilolo. In addition, the entire Wai`anae Coast is subject to severe damage from any major tsunami. The tsunami evacuation zone here extends up to, and in some cases as much as ¼ mile mauka of Farrington Highway.

#### **4.5.2 General Policies Pertaining to Flooding and Drainage**

##### **4.5.2.1      Wai`anae District Local Drainage Improvements Plan and Program**

A comprehensive study of local flooding and drainage problems in the Wai`anae District should be developed, together with a phased plan for the correction of these problems. Corrective measures may include removal of barriers, cleaning of drainage channels and stream channels, regrading areas to encourage positive drainage, and construction of new drainage channels, culverts, and other drainage structures. The Drainage Improvements Plan and Program should also include programs for the ongoing enforcement of rules and regulations relating to proper grading and drainage for both urban development projects and agricultural use of the land, and public education.

Drainage system design should emphasize control and minimization of nonpoint source pollution and retention and detention. Modifications if needed for flood protection should maintain rural character and aesthetic quality, avoid degradation of coastline and of stream and near shore water quality. To the extent possible, integrate planned drainageway improvements into the regional open space network by providing for access for pedestrians and bicycles.

##### **4.5.2.2      Sediment Control Program**

There is also a need for the establishment of a well-designed and well-managed sediment control program to protect both stream quality and the quality of nearshore waters. Minimally, standards for the creation and use of sediment basins at critical locations on both agricultural and urban lands should be established. Thereafter, a program of phased implementation and conscientious enforcement of sediment control measures should be pursued.

## **4.6 SOLID WASTE HANDLING AND DISPOSAL**

### **4.6.1 Overview of Solid Waste Issues**

Collection and disposal of domestic solid waste is provided by the City's Refuse Division. Solid waste from Wai`anae and from other O`ahu districts is disposed of at the Waimanalo Gulch Sanitary Landfill and at the H-POWER waste-to-energy facility, both located in the Ewa District. These methods of disposal are limited in their capacities, and the City has therefore instituted a program of mandatory recycling for commercial and industrial solid wastes.

The PVT Nānākuli Construction and Demolition Material Landfill on Luualaei Naval Station Road is an important privately owned solid waste disposal facility. This landfill manages over 20 percent of O`ahu's waste stream.

The local solid waste issue that seems to be of most concern to the Wai`anae community is the problem of illegal dumping of all kinds of solid waste, including material from demolished buildings and from construction sites, old cars, old appliances, animal carcasses, animal wastes, and various other kinds of junk and debris. The many country roads and open spaces in the Wai`anae District are unfortunately very easy to use for illegal and indiscriminate dumping of unwanted solid (and liquid) wastes. The many illegal dump areas in the District are both unsightly and a threat to public health. Much stronger State and City controls are needed to combat this problem.

### **4.6.2 General Policies Pertaining to Solid Waste Disposal**

#### **4.6.2.1 Enforcement of Anti-Dumping Laws**

Public agencies should coordinate with the community to develop and implement a comprehensive program for the cleanup of illegal dumps and the ongoing enforcement of laws forbidding illegal dumping of wastes and debris. The enforcement program may include some form of partnership with the community whereby each subcommunity of the Wai`anae District organizes volunteers who will patrol the area's roads on a regular basis and report to a designated code enforcement officer any illegal dumps or illegal dumping activity. Public agencies, in turn, must provide the manpower to follow up on these reports of illegal dumping. The appropriate field visits and investigations must be made, and, where necessary, prosecution of offenders must be pursued.

## **4.7 CIVIC, PUBLIC SAFETY AND EDUCATIONAL FACILITIES**

### **4.7.1 Overview of Civic, Public Safety and Educational Facilities**

Wai`anae Satellite City Hall is located within the Wai`anae Community Center Building on Farrington Highway, just south of Wai`anae Intermediate School. This office is open Monday through Friday from 7:45 a.m. to 4:30 p.m. Services include:

- Car Registration Renewal
- Car Transfer of Ownership
- Dog and Bicycle Licenses
- Spay/Neuter Certificates
- Monthly Bus Passes
- Picnic and Campsite Permit Applications
- Voter Registration
- Birth and Death Certificate Applications
- Conference Room

The Honolulu Police Department provides police services to the Wai`anae District through the Wai`anae Police Station and the Barbers Point substation. Between 14 to 17 police officers are normally on duty to service the area. The Wai`anae Police Station handles a large number of 911 calls and a large number of arrests: typically about 5,000 to 6,000 calls to 911 and 500 to 600 arrests in an average month. There are not enough officers to handle this substantial need for police services.

The Honolulu Fire Department has two fire stations in the Wai`anae District—one in Nānākuli and the other in Wai`anae Valley. The Nānākuli Fire Station is equipped with a 5-person engine, a 1-person tanker truck, and an inflatable rescue boat. The Wai`anae Fire Station is equipped with a 5-person engine, a 5-person quint (combination pumper/ladder truck), and a 1-person tanker. Backup service is provided by fire stations located in Kapolei, Makakilo, Ewa, and Waipahu. The firefighters in the Wai`anae District are called upon to respond to a large number of brushfires each year, especially during the dry summer months.

Emergency ambulance service is also provided out of the Wai`anae Fire Station with one unit. Patients are taken to Saint Francis West Hospital or the Wai`anae Comprehensive Health Care Facility. In severe cases,

a helicopter is dispatched to Wai`anae to transport patients to Queen's Medical Center. Members of the community have voiced the need for a full service hospital on the Wai`anae Coast. There is also a need for a second ambulance.

The Wai`anae District currently contains 10 public schools operated under the State Department of Education (DOE). There are seven (7) elementary schools, one (1) intermediate, one (1) combined intermediate and high school and one (1) high school (see Figure 4-2). The capacities of each of the schools and total enrollment as of the 1997 school year are shown in Table 4-2.

Elementary Schools in Wai`anae and Māhaha Valleys are large enough to accommodate their 1998 student population. Mā`ili, Luahalei and Nānākuli Elementary Schools are near or at capacity. The 1998 student population of Wai`anae High School exceeded its capacity by over 200 students, and Nānākuli Intermediate and High School is near its capacity.

DOE has plans to construct two new schools in the Nānākuli area. Nānākuli IV Elementary School is planned to open in the year 2002, on the site known as Camp Andrews. However, this school is intended to replace the existing Nanaikapono Elementary School. The design capacity of the school is planned to be 750 students, with total capacity equal to 1,000 students using a year-round, multitrack schedule. This is less than the current enrollment at Nanaikapono Elementary School.

The second elementary school that DOE plans to construct is called Nānākuli III Elementary School. This school is currently planned to open in the 2004 to 2015 time period. Design capacity is planned at 775 students. The site for this school has not yet been selected.

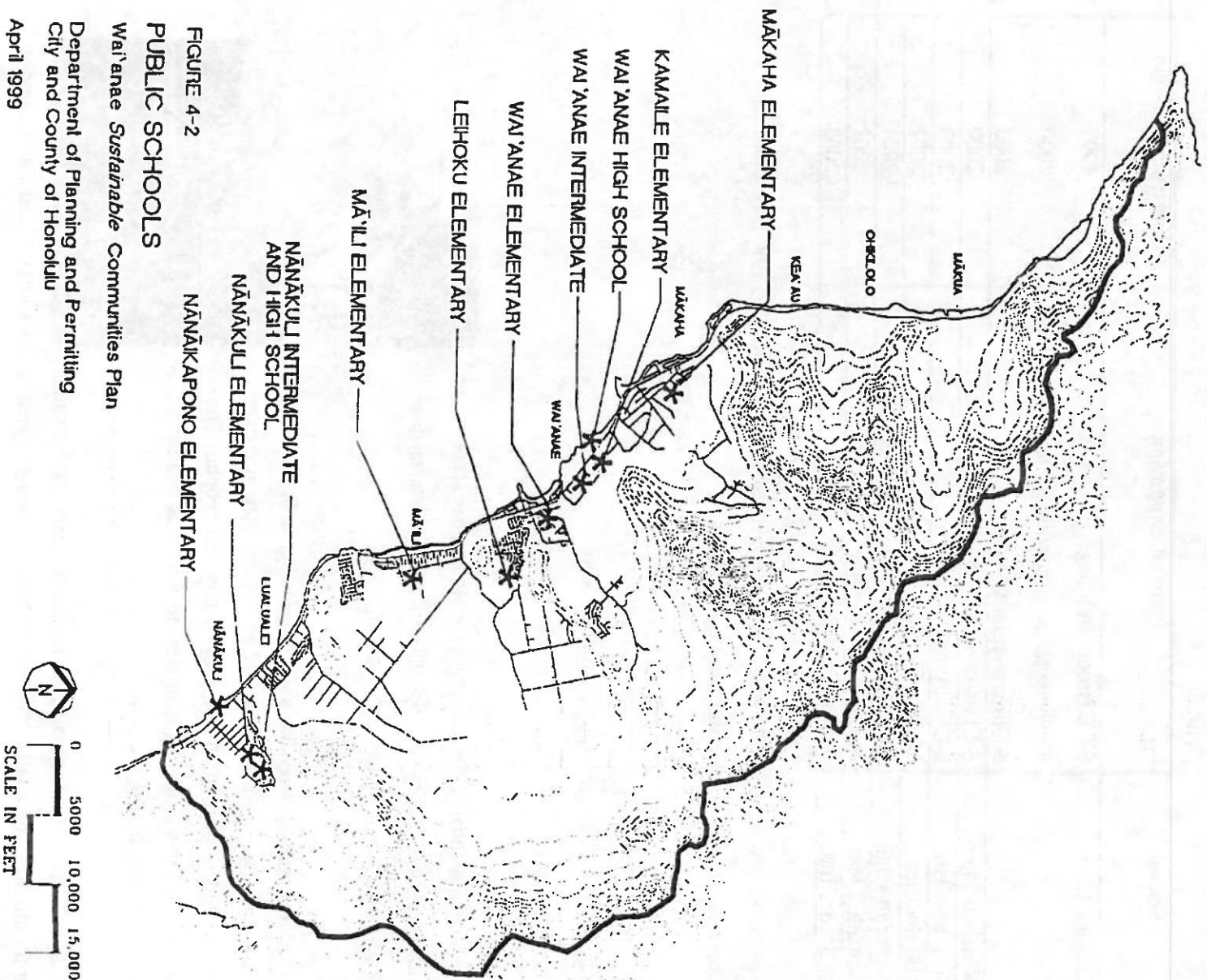
DOE also plans to expand four of the schools in the Wai`anae district by constructing additional classroom buildings. These school expansion projects are listed in Table 4-3.

**TABLE 4-2**  
**Public School Enrollment, 1997**

<b>School</b>	<b>Enrollment</b>	<b>Capacity</b>
<b>Elementary (K-6):</b>		
Nānākuli	650	562
Nanaikapono	1,041	1,163
Mā`ili	967	972
Leihoku	779	768
Wai`anae	736	1047
Kamaile	796	737
Mākaha	697	875
<b>Elementary Totals</b>	<b>5,666</b>	<b>6,124</b>
<b>Intermediate (7-8)</b>		
Wai`anae	1,166	1,146
Nānākuli Inter.*	451	--
<b>Intermediate Totals</b>	<b>1,617</b>	<b>1,146</b>
<b>High School</b>		
Nānākuli H.S.*	866	1,395
Wai`anae H.S.	2,164	1,950
<b>H.S. Total</b>	<b>3,030</b>	<b>3,345</b>
<b>Secondary Schools Total</b>	<b>4,647</b>	<b>4,491</b>
<b>TOTAL STUDENTS</b>	<b>10,313</b>	<b>10,615</b>

\*Capacity of Nānākuli Intermediate and High School is 1,395 students.

Actual 1997 student population is shown separately.



**TABLE 4-3**  
**DOE School Expansion Projects**

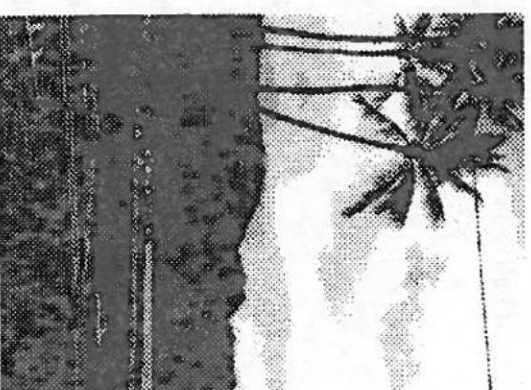
School	Planned Expansion	Construction Begin
Leihoku Elem.	6-Classroom Building	1997
	Renovate temp. admin/library to 3 classrooms	2000
	6-Classroom Building	2005
Nānākuli Elem.	8-Classroom Building	2000
Wai`anae High	8-Classroom Building	2000
Mākaha Elem.	Library Expansion	2001
Nānākuli High	8-Classroom Building	2001
Kamaile Elem.	8-Classroom Building	2002
Wai`anae Inter.	4-Classroom Building	2003

For new schools (excluding those with funds appropriated prior to March 20, 1997) the Board of Education's standards for optimum enrollments are:

Elementary Schools:	550 students
Intermediate Schools:	600 students
High Schools:	1,000 students

DOE's previous standards for maximum enrollment per school were 750 students for elementary schools, 900 students for intermediate schools and 1,500 students for high schools.

Leeward Community College has a satellite facility in Wai`anae that offers Associate Degrees and vocational programs, such as nursing. The current student population is approximately 250 people. The college is located in a single building next to Wai`anae Mall and contains six (6) classrooms.



Wai`anae also offers a number of enrichment programs on Hawaiian culture for children and adults. One of the better known programs is the Cultural Learning Center at Ka`ala. This center began operations in 1979 with a focus on working with youth and adults on "hands-on" projects, such as planting taro and other food and medicinal plants in Wai`anae Valley. The focus of the program is "Aloha `Aina—loving and caring for the Land."

It is recognized that public schools are a State function, and that the City's *Sustainable Communities Plans* cannot provide definitive plans for these facilities. However, City policies can provide some guidance to the development of future schools for the community.

#### **4.7.2 General Policies Pertaining to Civic, Public Safety and Educational Facilities**

##### **4.7.2.1 Quality of Facilities and Adequacy of Staffing**

There is a need for improvements in both the quality of public facilities and the level of staffing for some of these facilities. Specifically, the Wai`anae Satellite City Hall needs to be improved in terms of staffing, programs, equipment, and maintenance. The Wai`anae Police Station needs more manpower. Adequate police services are critical to the safety and welfare of Wai`anae's people. A second ambulance should be provided.

##### **4.7.2.2 Selection of Sites for New Schools**

Even if future growth in the Wai`anae District is fairly slow, there will be an eventual need for one or more new elementary schools, and possibly another Intermediate School and High School by the Year 2020. The sites for these new schools should be selected through a careful study process. Public agency planners should coordinate with the community to ensure that the site selection process for new schools fully considers the plans and policies that make up the Wai`anae *Sustainable Communities Plan*. Specifically, the site selection studies will need to focus on potential sites within the Rural Community areas, and eliminate from consideration any sites on Agricultural lands or sites makai of Farrington Highway. The construction of a school on Agricultural land would encourage urban and suburban development that is not compatible with the intent of this land use designation, and would potentially compromise the learning environment for students, teachers and staff due to odors, dust and vectors that often accompany agricultural land uses.

##### **4.7.2.3 Multipurpose Function of Schools**

School planners should consider the multipurpose role of schools in the community. Thus, in addition to classroom education, schools in many communities throughout the State provide other functions and facilities that are important to the community, including after school programs, meeting places for adult education and special programs, meeting places for community groups and organizations, and meeting places for youth groups and health and fitness classes. School playgrounds and playing fields are often favorite gathering places for young people during the afternoon and weekends. Schools are also the

primary emergency shelters during hurricanes, tsunami or other large-scale emergency events. Recognizing these diverse functions of public schools, new schools should be sited in centralized locations that are easily accessible to a large number of residents.

#### **4.7.3 Planning Guidelines for Civic, Public Safety and Educational Facilities**

##### **4.7.3.1 General Design Standards**

Public buildings, whether designed and constructed by federal, state, or city agencies or by other quasi-public entities, should be designed to be both functionally efficient and aesthetically pleasing. Too many public buildings on O`ahu, including police stations, fire stations, and schools, have been designed with insufficient attention to sound design principles, which should include:

- The use of building forms and materials that reflect Hawaii's diverse cultural and architectural heritage.
- The predominantly residential scale of the built environment of the Wai`anae District. Massive building forms would not be compatible with this residential scale.
- The hot, dry climate of the coastal plain zone of the Wai`anae District. Public buildings should therefore incorporate "natural" cooling devices including lanais, wide roof overhangs, natural air circulation, strategically placed shade trees, and cooler colors for exterior walls.
- Related open areas including front yard areas, parking lots, playgrounds, and garden spaces should be generously planted with colorful trees, shrubs, and ground covers. Drought-tolerant native plant species should be favored.

#### **4.8 HEALTH CARE FACILITIES**

##### **4.8.1 Overview of Health Care Facilities**

There is a wide variety and a large number of health care facilities and programs in the Wai`anae Development Plan area. These programs include mental health, family violence counseling, substance abuse counseling and health support groups (e.g., Alzheimer, cancer, diabetes, AIDS, etc.).

Regular health care services are provided by Kaiser Permanente in Mā`ili and by the Wai`anae Coast Comprehensive Health Center. Emergency service for Kaiser Permanente is provided from the Moanalua center with ambulance service provided by the Leeward Clinic in Waipahu. The nearest hospital is the Saint Francis West Hospital located in Waipahu. For severe cases, a helicopter is dispatched to the Wai`anae coast

and the patients are taken to Queen's Medical Center.

Wai`anae Coast Comprehensive Health Center is an outpatient medical clinic that offers a wide variety of health care and support group services, including:

- **Baby S.A.F.E.**—Provides services for problems caused by substance abuse during pregnancy, which includes prevention, education, assessment, individual and group therapy, skill building classes, support groups, and referrals to medical providers for prenatal care.
- **Diabetes Intervention/Ohana Health Outreach and Diabetes Support Group**—Support groups.
- **Family Planning**—Family planning counseling and services, STD education, and teen clinic.
- **HIV/AIDS**—Information line, testing and counseling.
- **Home Health Base/Private Duty Nursing**—Home visits to homebound clients authorized by the physician, provides assistance by instruction, treatment and support, and in coordinating supplies, equipment and community resources.
- **Homeless Outreach**—Includes case management, health outreach, coordination of support services, advocacy and patient monitoring. Outreach team goes out to beaches and inner communities and provides health assessments, patient follow-up, immunization, referrals and transportation to and from the center.
- **Malama Ola**—Therapeutic and preventive counseling for any nutrition-related acute or chronic disease (such as diabetes, hypertension, cardiovascular disease, anorexia nervosa, etc.).
- **Malama Recovery**—Comprehensive response to problems caused by substance abuse during pregnancy. Services include prevention, education, assessment, individual and group therapy, skill building classes, support groups, and referrals to medical providers for prenatal care.
- **Perinatal Project**—Prenatal care including outreach, education and social support services.
- **Sex Abuse Treatment Program**—Emergency sex abuse counseling and services for rape victims and families.
- **Wai`anae Diet**—Controlled diet program, nutrition counseling and public presentations.
- **Wai`anae Women's Health Network**—Outreach and education for cancer and other health issues.
- **Women, Infants, and Children**—Nutrition assessment and intervention, food supplement distribution, individual and group education.

The Wai`anae Coast Community Mental Health Center also offers a number of programs and services. They operate six Headstart offices at Koa Ike, Nānākuli, Pu`u Heleakala, Mā`ili, Mākaha, and Wai`anae. These offices provide comprehensive child development programs with education, health and social services. The service is offered to low-income children and their families as well as to people with handicapped conditions

or referrals from the Child Protective Services. Education and vocational support services, job search and placement are also provided for persons 55 years of age or older.

Although there are no housing facilities for the elderly in the Wai`anae District, there are programs and services that provide assistance to the elderly. Adult day care is provided by Wai`anae Adult Day Care operating out of the Wai`anae Coast Comprehensive Health Center. Activities such as crafts and exercise in a social environment are provided, as well as breakfast, lunch and a snack.

Other programs for the elderly include the Honolulu Gerontology Program that offers exercise and social support twice a week; Hui O Ka`ala, Kupuna O Nānākuli, and Wai`anae Golden Age that provide social activities and crafts; and senior citizens social clubs.

#### **4.8.2 General Policies Pertaining to Health Care Facilities**

##### **4.8.2.1      Quality Facilities**

Support and assist community health care facilities and programs to ensure high quality health care for Wai`anae residents.

##### **4.8.2.2      New Facilities**

Assess the need for new health care facilities, including possibly a full-service hospital. Proceed with planning and funding of new health care facilities as appropriate.

#### **4.9      RELATION TO PUBLIC FACILITIES MAP**

The major existing and planned public facilities discussed in Chapter 4 for the Wai`anae District are located schematically on the Public Facilities Map in Appendix A.

### **5. IMPLEMENTATION**

#### **5.1      OVERVIEW OF PLAN IMPLEMENTATION CHALLENGES AND TOOLS**

Implementation of the City's revised Development and *Sustainable* Communities Plans will be a major challenge for the City's planners, engineers, and other technical and policy-level personnel, as well as elected

officials who determine the allocation of City resources. In contrast to previous Development Plans, which functioned primarily as regulatory guides and a prerequisite for City zoning of parcels proposed for development, the revised plans are oriented toward implementation on a broader scale. They now seek to implement a vision for the future by providing wider guidance for decisions and actions related to land use, public facilities, and infrastructure as well as for zoning matters. As a result, many of their provisions reflect the consultations which occurred throughout the planning process with pertinent implementing agencies and community representatives.

Many other City, county, and town jurisdictions on the U.S. mainland have instituted comprehensive planning programs that emphasize a proactive community-based planning and implementation process. These local governments seek to establish a strong link between planning policies and guidelines, and specific organization, funding, and actions needed to implement a variety of public and private projects and programs. The following sections of this Chapter are intended to strengthen the linkage to implementation to realize the vision of the future presented in this plan.

Implementation of the Wai`anae *Sustainable Communities* Plan should thus be pursued through a variety of means, including:

- Organization and action by the appropriate City departments towards the realization of the policies contained in the *Sustainable Communities* Plan;
- On-going cooperation and communication with community leaders and community organizations in order to accomplish the objectives of the *Sustainable Communities* Plan;
- Broad dissemination and explanation of the *Sustainable Communities* Plan to public agencies, landowners, major local development companies, community services providers, and community organizations. The Wai`anae *Sustainable Communities* Plan can be an effective planning guide if it is widely known and supported;
- Guiding the City's investment in infrastructure in accordance with the policies and guidelines of the *Sustainable Communities* Plan;
- Initiating development code amendments to achieve consistency with the *Sustainable Communities* Plan, including changes to the Land Use Ordinance that will result in standards that are more appropriate to rural areas;
- Recommending approval, approval with modifications or denial of developments seeking zoning and other development approvals based on their conformance with the *Sustainable Communities* Plan;
- Evaluating progress in fulfilling the vision of the Wai`anae *Sustainable Communities* Plan every two years, and presenting the results of the evaluation in the Biennial Report; and

- Conducting a review of the vision, policies, guidelines, and CIP priority investments of the Wai`anae *Sustainable* Communities Plan every five years and recommending revisions as necessary.

## 5.2 PUBLIC FACILITY INVESTMENT PRIORITIES

The VISION for the Wai`anae District requires the cooperation of both public agencies and private organizations in planning, financing, and improving infrastructure. The City must take an active role in planning infrastructure improvements, such as land acquisition and site improvements for neighborhood parks, provision of adequate public access to the shoreline, provision of pedestrian, bicycle, and other transportation options, planning and implementation of drainage improvements, and improvements to the Wai`anae Satellite City Hall and to the Wai`anae Community Center building.

## 5.3 DEVELOPMENT PRIORITIES

Projects that should receive priority in the process of City land use approvals are those which:

- Involve land acquisition and improvements for public projects that are consistent with the *Sustainable* Communities Plan vision, policies, and planning guidelines;
- Involve applications for zoning and other regulatory approvals that are consistent with the *Sustainable* Communities Plan vision, policies, and planning guidelines;
- Are located on usable parcels of land that are consistent with the *Sustainable* Communities Plan Land Use Map.

## 5.4 SPECIAL AREA PLANS

Special Area Plans provide more detailed policies and guidelines than the *Sustainable* Communities Plan for areas requiring particular attention. The form and content of Special Area Plans depend on what characteristics and issues need to be addressed in greater detail in planning and guiding development or use of the Special Area.

Special Area Plans can be used to guide land use development and infrastructure investment in Special Districts, Redevelopment Districts, or Resource Areas. Plans for **Special Districts** provide guidance for development and infrastructure investment in areas with distinct historic or design character or significant visual and scenic resources. Plans for **Redevelopment Districts** provide strategies for the revitalization or the redevelopment of an area. Plans for **Resource Areas** provide resource management strategies for areas with

special natural and cultural resource values.

Mākaha Valley has been identified for Special Area Plan status because of several important characteristics:

- The City owns approximately 4,000 acres of land in the upper valley and the steeper valley walls;
- Most of the valley has been designated "urban" under the State Land Use system;
- There are approximately 350 acres of undeveloped land in Mākaha Valley that are already zoned for Residential and Resort uses;
- The only existing resort in the District, the Mākaha Resort, recently closed due to lack of business, and the future of this special resort property is at this time unknown;
- Mākaha Valley is an important resource area in terms of water resources, rare and endangered plants and animals, and cultural sites.

The Mākaha Special Area Plan will be developed through a community-based planning process.

## 5.5 FUNCTIONAL PLANNING

Functional planning is the process by which various City agencies determine needs, assign priorities, phase projects, and propose project financing to further implement the vision articulated in the *Sustainable Communities Plans*. This process may take a variety of forms, depending upon the missions of the various agencies involved, as well as upon requirements imposed from outside the City structure, such as federal requirements for wastewater management planning.

Through the functional planning process, City agencies responsible for developing and maintaining infrastructure and public facilities or for provision of City services review existing functional planning documents and programs. As a result of these reviews, the agencies then update, if required, existing plans or prepare new long-range functional planning documents that address facilities and service system needs. Updates of functional planning documents are also conducted to assure that agency plans will serve to further implement the *Sustainable Communities Plans* as well as to provide adequate opportunity for coordination of plans and programs among the various agencies.

The functional planning process should have opportunities for early and continuing public involvement, timely public notice, public access to information used in the evaluation of priorities, and opportunities to suggest alternatives and to express preferences. The functional planning process provides the technical background for the Capital Improvement Program and public policy proposals that are subject to review and approval by the City Council.

## **5.6 REVIEW OF ZONING AND OTHER DEVELOPMENT APPLICATIONS**

### **5.6.1 Wai`anae District Zoning Designations**

A primary way in which the Wai`anae *Sustainable* Communities Plan will guide land use will be through the review of applications for zone changes and other development proposals. Approval for all development projects should be based on the extent to which the project supports the policies and guidelines of the *Sustainable* Communities Plan.

Projects that do not involve significant zone changes will be reviewed by City Planners for consistency with the policies and guidelines of the Wai`anae *Sustainable* Communities Plan during the Zone Change or permit application process. Projects involving significant zone changes will require an environmental review in accordance with HRS Chapter 343.

### **5.6.2 Adequate Facilities Requirement**

All projects requesting zone changes shall be reviewed to determine if adequate public facilities and infrastructure will be available to meet the needs created as a result of the development. Level of Service Guidelines to define adequate public facilities and infrastructure requirements will be established as part of the City's Capital Improvement Program.

In order to guide development and growth in an orderly manner as required by the City's General Plan, zoning and other development approvals for new developments should be approved only if the responsible City and State agencies indicate that adequate public facilities and utilities will be available at the time of occupancy or if conditions the functional agency indicates are necessary to assure adequacy are otherwise sufficiently addressed.

Staff planners, as part of their report to the Department of Planning and Permitting on the consistency of the project with the Wai`anae *Sustainable* Communities Plan, will review and summarize any individual agency's findings regarding public facilities and utilities adequacy which are raised as part of the EA/EIS process. The Department of Planning and Permitting will address these findings and any additional agency comments submitted as part of the agency review of the zone change application and recommend conditions that should be included in the Unilateral Agreement or Development Agreement to insure adequacy of facilities.

## **5.7 FIVE-YEAR SUSTAINABLE COMMUNITIES PLAN REVIEW**

The Planning Division shall conduct a comprehensive review of the Wai`anae *Sustainable* Communities Plan

and shall report its findings and recommended revisions to the Planning Commission and the City Council five years after adoption and every five years thereafter.

In the Five-Year review, the Wai`anae *Sustainable* Communities Plan will be evaluated to see if the regional vision, policies, guidelines, and implementing actions are still appropriate.

## **5.8 TRANSITION FROM THE CURRENT SYSTEM**

This section discusses the transition from the former Development Plan to this revised *Sustainable* Communities Plan, including its independence from Development Plan Common Provisions, its relationship to the General Plan guidelines, and the need for review and revision of development codes, standards, and regulations.

### **5.8.1 Development Plan Common Provisions and Existing Land Use Approvals**

This *Sustainable* Communities Plan will go into effect upon adoption by ordinance. At that time, the *Sustainable* Communities Plan will become a self-contained document, not reliant on the Development Plan Common Provisions which formerly applied to the Wai`anae Development Plan as well as all the other Development Plans.

Land use approvals granted under existing zoning, Unilateral Agreements, and approved Urban Design Plans will remain in force and guide entitlement decisions until any zoning action to further implement the vision and policies of the Wai`anae *Sustainable* Communities Plan is initiated. If an Environmental Assessment or Environmental Impact Statement (EA/EIS) was accepted in the course of a Development Plan land use approval for a project, it should be acceptable to meet the requirement for an initial project EA/EIS when zone change applications are submitted for subsequent phases of the project unless the project scope and land uses are being significantly changed from those described in the initial EA/EIS.

### **5.8.2 Relation to General Plan Population Guidelines**

The Wai`anae *Sustainable* Communities Plan implements the General Plan population guidelines in Population Objective "C," as follows:

- Total potential population in the Wai`anae *Sustainable* Communities Plan Area may account for

approximately 4.5 to 5.0 percent of O`ahu's total population by the Year 2020. The Wai`anae District's total projected share of islandwide population generally implements Population Objective C, Policy 3, which is to manage physical growth and development in the urban-fringe and rural areas so that an undesirable spreading of development is prevented and that the suburban and country character of these outlying areas can be maintained.

- The General Plan population share for the Wai`anae District according to Population Objective C, Policy 4, ranges from 3.8 percent to 4.2 percent by the Year 2010. The City's most recent projected 2020 population for the Wai`anae District is somewhat higher than this range, reflecting the substantial population growth that had already occurred in the District by 1998. This *Sustainable Communities Plan* should result in a lessening of the rate of population growth in the Wai`anae District

The General Plan population distribution guidelines will continue to be used as a guide to direct the pattern of growth and development in the Wai`anae District. Assessments of this performance will be reported in both the Biennial Report and in the Five-Year Review of the *Sustainable Communities Plans*.

### 5.8.3 Review and Revision of Development Codes

Upon completion of the *Sustainable Communities Plan* Revision Program, current regulatory codes and standards should be reviewed and revised, as necessary, to maintain their consistency and effectiveness as standards to guide attainment of the objectives and policies envisioned for all *Sustainable Communities Plan* areas. At the time that such reviews are conducted, the following regulatory codes and standards may warrant further review and revision to ensure achievement of the vision for the Wai`anae District and consistency with the *Wai`anae Sustainable Communities Plan*:

- **Land Use Ordinance.** (Chapter 21, Revised Ordinances of Honolulu) Zoning code standards and the zoning map for the Wai`anae District need to be revised to further implement the policies and guidelines of the *Sustainable Communities Plan*. Special zoning provisions may be needed for the Commercial Centers and Gathering Places.
- **Subdivision Rules and Regulations.** (Department of Planning and Permitting, pursuant to Chapter 22, Revised Ordinances of Honolulu) Public road right-of-way standards used for

subdivisions and rules for the consolidation of land may need to be revised to reflect the rural emphasis of the policies and guidelines in the Wai`anae *Sustainable* Communities Plan.

- **Traffic Standards Manual.** (Department of Transportation Services, July 1976, as revised) Standards that are applied to local and most collector streets may need to be revised to reflect transportation policies and guidelines in the *Sustainable* Communities Plan.
- **State Highways Division Procedures Manual**, Volume 8, Chapter 5, Section 4. (State Department of Transportation) These State highway standards need to be reviewed to identify provisions that may conflict with the transportation policies and guidelines in the *Sustainable* Communities Plan.
- **Standard Details for Public Works Construction.** (Department of Planning and Permitting) Engineering standards for the dedication of public works construction need to be revised to reflect *Sustainable* Communities Plan policies and guidelines.
- **Storm Drain Standards.** (Department of Planning and Permitting) Standards for the dedication of drainage systems to incorporate retention basins and the use of v-shaped bottom channels, rip-rap boulder lining of stream banks, and streamside vegetation into the design need to be created to further implement the *Sustainable* Communities Plan policies and guidelines for open space.
- **Park Dedication Rules and Regulations.** (Department of Planning and Permitting, pursuant to Chapter 22, Article 7, Revised Ordinances of Honolulu) Regulations need to be reviewed to determine if passive drainage systems which are designed for recreational use should count toward park dedication requirements, especially in cases where the area would exceed the amount of land that would be required under current rules and regulations.
- **Wastewater Management Design Standards.** Department of Design and Construction and the 1990 Revised Ordinances of Honolulu, Chapter 14, relating to sewer services) These standards and ordinances may require review to further implement *Sustainable* Communities Plan policies and guidelines.

## **APPENDIX: THE GRAPHIC MAPS: LAND USE, OPEN SPACE, AND PUBLIC FACILITIES**

### **INTRODUCTION**

The *Wai`anae Sustainable Communities Plan* includes three colored maps:

- The Land Use Map
- The Open Space Map
- The Public Facilities Map

These maps illustrate the long-range VISION for the Wai`anae District and the major land use, open space, and public facility policies that are articulated in the plan. In examining them the reader should keep in mind that:

1. These maps are general and conceptual.
2. They are illustrative of the plan's policy statements, presented in the text of this report.

These policy statements, which appear in the preceding chapters, are considered to be the most important elements of the plan. The maps are considered illustrations of the policies. However, it is recognized that the maps may be more accessible and more interesting than the written policies. This section of the plan, therefore, presents a brief explanation of the contents of each of these maps.

Elements common to each of the three maps include organizing boundaries and four land use designations: "Preservation," "Agriculture," "Rural Residential," and "Golf Course." These common elements are discussed below. Information particular to each map is presented under each map topic.

The maps which follow display Rural Community Boundaries, Agriculture Boundaries, and Preservation Boundaries. They are not parcel-specific, but illustrate generalized categories or groups of land uses within the region.

Because they are not parcel-specific, the lines depicted by these boundaries do not indicate precise or abrupt

demarcations. Rather, the extent of permissible or appropriate uses within these boundaries should be evaluated and determined in concert with relevant sections of the plan's text and specific site characteristics. Summary descriptions of each boundary category follow below.

### 1. Rural Community Boundary

The rural community boundary defines, protects, and contains the intended extent of the "built-up" or "settled" areas of rural communities. Its purposes are to provide adequate lands to support established communities, to protect such communities from more intense forms of development, and to protect lands outside the boundary for agriculture or other resource or open space values. Areas within this boundary characteristically consist of relatively small, dispersed residential communities and towns.

In the Wai`anae District, the Rural Community Boundary is defined by a line that has been drawn to delineate and contain the Farrington Highway development corridor. This line, although conceptual in nature, has been drawn and should be interpreted such that the mid-section of the line more or less coincides with the limits of lands that are zoned as of June 1998, R-5 and R-10, as well as existing scattered zoned commercial and industrial sites and the major residential developments of the Department of Hawaiian Home Lands in Nānākuli. The intent of this line is to identify existing urban/suburban areas, allow for infill residential and commercial development on undeveloped parcels within this boundary, and clearly define the limits of urban/suburban development. Thus, no new urban/suburban development shall be allowed mauka of this Rural Community Boundary line, except for already residentially zoned lands in Mākaha Valley. Lands mauka of this line are designated "Agriculture" and "Preservation." Continued small-scale agricultural uses of small farm lots within the Rural Community Boundary should be encouraged.

### 2. Agriculture Boundary

The agriculture boundary is intended to protect important agricultural lands for their economic and open space values, and for their value in helping to give a region its identifiable character.

Lands within this boundary include agriculturally valuable lands outside the Urban or Rural Community Boundaries. They include agriculturally important lands designated by ALISH as "prime," "unique," or "other."

### 3. **Preservation Boundary**

The primary purpose of Preservation boundaries is to protect lands that are not valued primarily for agriculture, but that form an important part of a region's open space fabric for their natural, cultural, or scenic resource values.

### 4. **Preservation**

Preservation lands include those lands not valued primarily for agriculture, but that form an important part of a region's open space fabric. They possess natural, cultural, or scenic resource values, and include important wildlife habitat, cultural sites, significant landforms, views, or hazard areas. They include the following types of land:

- Land necessary for protecting watersheds, water resources and water supplies.
- Lands necessary for the conservation, preservation and enhancement of sites with scenic, historic, archaeological or ecologic significance.
- Lands necessary for providing and preserving park lands, wilderness and beach reserves, and for conserving natural ecosystems of endemic plants, fish and wildlife, for forestry, and other related activities to these uses.
- Lands having an elevation below the maximum inland line of the zone of wave action, and marine waters, fishponds and tide pools of O'ahu unless otherwise designated on the development plan land use map.
- All offshore and outlying islands of O'ahu unless otherwise classified.
- Lands with topography, soils, climate or other related environmental factors that may not be normally adaptable or presently needed for urban, rural or agricultural use.
- Lands with general slopes of 20 percent or more which provide for open space amenities and/or scenic values.

- Lands susceptible to floods and soil erosion, lands undergoing major erosion damage and requiring corrective attention by the State or Federal Government, and lands necessary to the protection of the health, safety and welfare of the public by reason of soil instability or the lands' susceptibility to landslides and/or inundation by tsunami and flooding.
- Lands used for national, state or city parks.
- Lands suitable for growing of commercial timber, grazing, hunting, and recreation uses, including facilities accessory to such uses when said facilities are compatible with the natural physical environment.

## 5. Agriculture

Lands with agricultural value by virtue of current agricultural use or high value for future agricultural use, including those areas identified as Prime, Unique, or Other Important lands on the Agricultural Lands Important to the State of Hawaii (ALISH) maps. "Agriculture" includes lands suitable for crop growing, grazing and livestock raising, flower cultivation, nurseries, orchards, aquaculture, or similar activities.

Included as Agricultural lands are existing "Country" zoned subdivisions with minimum lot sizes of one acre. The "Country" zoned subdivisions have been included in the Agricultural lands because many of the lots in these subdivisions are used for part-time agricultural pursuits. However, new "Country" subdivisions should not be allowed in the Agricultural lands. It is the intent of the Wai`anae *Sustainable Communities Plan* that these Agricultural lands be preserved in perpetuity for agricultural use.

## 6. Rural Residential

Most of the lands makai of the Rural Community Boundary are designated and colored "Rural Residential." This general designation is intended to include single-family homes, townhomes, small 2-story apartment buildings, and various relatively low-density community support facilities that are permitted in residentially zoned areas, including schools and churches. Also included in this general land use area are a number of small commercial and light industrial uses that are too small to map at this scale and are therefore included as nonconforming existing uses. Alternate development options which result in greater amounts of open space

and common facilities may also be used. The gross density of residential units should generally be in the range of 5 to 8 units per acre or up to 10 units per acre for alternative development options that preserve open space. Also included within this area as "grandfathered" residential uses are a number of existing "medium density" apartment buildings. New medium density apartment buildings or condominiums should not be permitted in "Rural Residential" areas.

## **7. Golf Courses**

Golf courses that were existing or approved as of June 1998 are included in this designation. These golf courses were: the Mākaha East golf course, the expansion area for an additional 9 holes at the Mākaha East course, the Mākaha West golf course, and the planned golf course on Luahalei Naval Station Road. No other golf courses are designated on the Land Use Map, and no additional golf courses are provided for in the *Sustainable Communities* Plan land use policies.

## **A.1 LAND USE MAP**

The **LAND USE MAP** illustrates both existing land uses within the Wai`anae District as well as the desired long-range future land use pattern that is in concert with the **VISION** and policies for the Wai`anae Coast. The Land Use Map thus includes the following elements:

### **A.1.1 Medium Density Residential**

There are only two areas on the Land Use Map that have been designated as Medium Density Residential: the site of the existing Mākaha Valley Towers project, and the site of the existing Mākaha Valley Plantation project. Both of these parcels are currently zoned "A-2," which allows a maximum density of 1.9 FAR for lots of 40,000 square feet or more. Medium density residential development on O`ahu generally has a gross density of 12 to 30 units per acre. The *Sustainable Communities* Plan Land Use Map thus recognizes the existence of these two zoned projects. However, it is the intent of the *Sustainable Communities* Plan that no other lands within the Wai`anae District be designated for "medium density," which is a relatively urban residential density.

### **A.1.2 Resort**

The Land Use Map recognizes the existence of two projects in Mākaha Valley that are at present zoned

"Resort": the site of the Mākaha Resort, and the site of the proposed Mākaha Conference Center. No other lands within the Wai`anae District are designated for Resort use on the Land Use Map.

#### **A.1.3 Mākaha Valley Special Area Plan**

A grey dashed line on the Land Use Map defines Mākaha Valley as a "Special Area Plan." This designation indicates a need for the development of a more detailed plan for future land use and land preservation. "Special Area Plans" have already been developed by the City for Waipahu and Wahiawa.

#### **A.1.4 Rural Community Commercial Center**

Smaller colored circles denote "Rural Community Commercial Centers" for the subcommunities of Nānākuli, Mā`ili, and Mākaha. The location of these Centers is schematic in nature. This designation is intended to encourage the development of smaller-scale concentrations of commercial establishments and community services in a physical configuration that will help to provide a stronger physical identity for these subcommunities.

#### **A.1.5 Country Town**

A small-scale, low-rise, mixed use center of commerce and community activity in rural character and setting in which principal establishments are oriented on the street. Land use mixtures may include retail, office, and dining establishments, compatible service businesses and light industry, and residential uses. Commercial activity is concentrated along street frontages in typically "Mainstreet" settings.

The Land Use Map shows the approximate location of the existing Wai`anae town center, which extends roughly from the Wai`anae Mall to the Wai`anae Community Center. The intent of this designation is to recognize the traditional and contemporary importance of the Wai`anae town center as the primary commercial hub of the Wai`anae Coast. The related policies encourage the renovation and development of this town center into a multifaceted "Country Town" center for the District.

#### **A.1.6 Industrial**

The Wai`anae District Land Use Map includes one area in the vicinity of the Wastewater Treatment Plant and Wai`anae Mall as "Industrial." The intent of this land use designation is to provide an area for the development

of nonpolluting, light industrial uses that would provide employment opportunities for local people. Some commercial uses should also be allowed in the "Industrial" area, to provide for an economically viable mix of uses, and also to serve as a buffer between light industrial uses and nearby residential areas. It is the intent of this "Industrial" use that industrial-mixed use "IMX" be allowed as a compatible zoning designation.

#### **A.1.7      Military**

The existing two large U.S. Navy installations and the U.S. Army's training lands in Mākuā Valley have been shown on the Land Use Map with an overlay graphic texture. The intent of the Land Use Map is thus to recognize the existence of these military uses, and to show that the long-range vision for these lands is for agricultural, open space, and preservation uses that are compatible with the principal policies of the Wai`anae *Sustainable Communities Plan*.

#### **A.1.8      Farrington Highway Beautification and Downsizing**

A dashed green line is used to symbolize the various proposed improvements for Farrington Highway, including safety improvements for vehicles and pedestrians, traffic-calming devices, sidewalks, bikeways, beautification, improved lighting, and down-sizing where possible.

#### **A.1.9      Reliever Road Concept**

A dashed grey line is shown to indicate alternative routes and potential primary local road connections for a future Reliever Road. More study will be required to resolve the best route for this road.

It is the intent of the Wai`anae *Sustainable Communities Plan* that these Agricultural lands be preserved in perpetuity for agricultural use.

The Preservation lands on this map generally coincide with the State Land Use "Conservation" District, except where known concentrations of cultural sites are located within the State Agricultural District. These cultural sites are included in the *Sustainable Communities Plan* "Preservation" area.

#### **A.2    OPEN SPACE MAP**

The Open Space Map is intended to illustrate the region's major open space patterns and resources as outlined in Chapter 3. It highlights major open space elements and resources, including agricultural and preservation lands, major recreational facilities, important "panoramic" views, natural stream corridors and drainageways, and important boundaries.

**A.2.1 Ahupua`a Boundary**

Ahupua`a boundaries, based on the traditional Ahupua`a method of land organization, have been adopted for use and displayed in the plan as a method of organizing land uses and enhancing community definition within the region.

The approximate boundaries of the 9 traditional ahupua`a of the Wai`anae Coast are shown on the map. These boundaries have great cultural, historical, and ecological significance, and should therefore provide a framework for the open space plan for the District.

**A.2.2 Stream Corridors**

The major perennial and intermittent stream corridors are shown on the Open Space Map. These corridors should be protected and preserved in accordance with the policies and guidelines articulated in this *Sustainable Communities Plan*.

**A.2.3 Concentrations of Archaeological Sites**

The known and probable concentrations of archaeological and cultural sites in the District are shown by means of an overlay graphic texture. These areas should be protected and preserved, and appropriate public access should be provided for.

**A.2.4 Heiau**

The approximate locations of known Heiau are shown on the map with brown squares.

**A.2.5 Parks**

Public and private parks and recreational facilities, including beach parks, playgrounds, playfields, district parks, botanical gardens, zoos, and golf courses. Neighborhood and beach parks are shown with a green circle.

**A.2.6 Small Boat Harbor**

The existing Wai`anae small boat harbor is shown with a blue circle. The harbor is an important facility for both recreational and commercial fishermen.

#### **A.2.7      Gathering Places**

The concept of community gathering places is presented in the *Sustainable Communities Plan* text. The location of future gathering places is schematically shown on the Open Space Map. These locations are subject to further planning by the various community groups that will take the lead in developing Gathering Places for their people.

#### **A.3      PUBLIC FACILITIES MAP**

The Public Facilities Map illustrates major existing and future public facilities and privately owned facilities for public use. Its purpose is to display the public resources or assets available in the region. When the plan is adopted, a separate "Public Infrastructure Map," which will focus on and display facilities eligible for City Capital Improvement Program funding, will also be developed. For the Wai`anae Region, the following types of facilities are displayed:

- Wastewater Treatment Plant
- Police Station
- Fire Stations
- High Schools
- Intermediate Schools
- Elementary Schools
- Small Boat Harbor
- Solid Waste Facility

The Public Facilities Map for the Wai`anae District also includes a conceptual alignment for bicycle lanes and bicycle routes:

- Dedicated bicycle lanes on Farrington Highway;
- Major valley roads designated and improved to accommodate bicycle routes.

Preliminary alternative routes for a possible "Reliever Road" are also shown.

WAI'ANAE SUSTAINABLE  
COMMUNITIES PLAN

LAND USE MAP

- RURAL COMMUNITY BOUNDARY
- SPECIAL AREA PLAN BOUNDARY
- FARMINGTON HIGHWAY BEAUTIFICATION
- POSSIBLE RELIEVER ROAD ROUTES
- RURAL RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- RESORT
- INDUSTRIAL
- GOLF COURSE
- AGRICULTURE
- PRESERVATION
- MILITARY
- COUNTRY TOWN
- RURAL COMMUNITY COMMERCIAL CENTER



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FIGURE A-1

